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STATEMENT

CONCERNING THE PROPOSED

BOULDER CANYON PROJECT ADJUSTMENT ACT

SUBMITTED JOINTLY ON BEHALF OF

THE STATES OF THE COLORADO RIVER BASIN:

ARIZONA
CALIFORNIA
COLORADO
NEVADA
NEW MEXICO
UTAH
WYOMING

THE BOULDER DAM POWER ALLOTTEES:

THE STATE OF NEVADA
THE STATE OF ARIZONA
THE CITY OF LOS ANGELES
THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA
THE CITY OF PASADENA
THE CITY OF GLENDALE
THE CITY OF BURBANK
SOUTHERN CALIFORNIA EDISON COMPANY LTD.
THE NEVADA-CALIFORNIA ELECTRIC CORPORATION

APRIL 15, 1939

ARIZONA HISTORICAL FOUNDATION
ARIZONA STATE UNIVERSITY

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STATEMENT

CONCERNING THE PROPOSED

BOULDER CANYON PROJECT ADJUSTMENT ACT.

This General Statement is intended to set forth in some detail—

1. The substance of those provisions of the present law which are proposed to be changed;
2. The principal relevant features of the contracts made thereunder;
3. The changes proposed and the facts calling for amendatory legislation;
4. The reasons for such changes.

It is generally recognized that the existing plan of financial operation of the Boulder Canyon Project requires revision. The seven States of the Colorado River Basin and all of the allottees of electrical energy under the Project have united in proposing amendatory legislation, designated as the "Boulder Canyon Project Adjustment Act," herein for brevity called the "Adjustment Act," to accomplish such revision.

The purpose of this statement is to explain the various features of the proposed revision and the reasons therefor.

These features may be divided into two classes:

Division One: Basic revisions of the plan of financial operation;

Division Two: Minor revisions, and features incidental to the basic revisions.

The features of the two classes will be discussed herein in the order stated.

Division One.

Basic Revisions of the Plan of Financial Operation.

The Boulder Canyon Project Act.

In order that the nature of, and need for, the proposed revisions may be understood, it is necessary that, in broad outline, the provisions of the existing law, so far as germane to the subject matter of the proposed Adjustment Act, should be stated.

The present law is found in the "Boulder Canyon Project Act" [45 Stat. 1057] approved December 21, 1928, herein for brevity called the "Project Act."

The Project Act [Sec. 1] authorizes the construction of three inter-related, but distinct, works, (1) a dam, now known as the Boulder Dam, and incidental works, (2) a power plant, and incidental structures, now known as the Boulder Dam Power Plant, and (3) a main canal, from the Colorado River to the Imperial and Coachella Valleys, now known as the All-American Canal, and appurtenant structures. The proposed Adjustment Act deals solely with the first two of these three works, and all references herein will be understood (unless the context clearly implies the contrary) to apply solely to Boulder Dam and incidental works, or to the Boulder Dam Power Plant, and incidental structures, or to both of these works, and to the advances from the Treasury made therefor, and to exclude the said All-American Canal and appurtenant structures, and the advances made for their construction.

The further provisions of the Project Act necessary to be stated here are as follows:

(1) That the dam shall be constructed for purposes of flood control, navigation, river regulation, storing and delivering water for reclamation and other beneficial uses, and "for the generation of electrical energy as a means of making the project * * * a self-supporting and financially solvent undertaking," [Sec. 1] and that the dam and reservoir shall be used: "First, for river regulation, improvement of navigation, and flood control; second, for irrigation and domestic uses and satisfaction of present perfected rights * * * and third, for power." [Sec. 6.]

> It will be noted that the dam is to be a multiple-use dam with power the most subordinate use.

(2) That advances shall be made from the Treasury, for the purposes of the Act, to the Colorado River Dam Fund [Sec. 2 (b)], created by the Act [Sec. 2 (a)], but that the Secretary of the Interior shall not proceed with construction until after entering into contracts adequate in his judgment to provide revenue sufficient to insure payment of all expenses of operation and maintenance, and repayment of the Government's advances, with 4% interest, within 50 years from the completion of the works [Sec. 4 (b)].

> It will be noted that the Government did not assume the risk which it has assumed in such recent projects as T. V. A., Bonneville, and Fort Peck, of finding a market for the power after the project was completed. At Boulder the Government was in effect guaranteed repayment through contracts executed before embarking upon construction.

(3) That 15 years after their dates and every 10 years thereafter, the contracts for electrical energy shall be

readjusted "upward or downward as to price, as the Secretary of the Interior may find to be justified by competitive conditions at distributing points or competitive centers" [Sec. 5 (a)].

> It will be noted that this made competitive conditions the criterion for fixing rates—in other words, "market value" was to control the price of the product.

(4) That $25,000,000 of the advances shall be allocated to flood control, and repaid with 4% interest, out of 62½% of the "excess" revenues, if any, during the "period of amortization," or if not so repaid in full, that the remainder shall be repaid thereafter out of 62½% of the "net revenues." [Sec. 2 (b)].

> There was no allocation of cost to the purposes of navigation, river regulation, or storage or delivery of water, for irrigation or domestic use or the satisfaction of existing rights, although such uses were made paramount to power. The so-called allocation of $25,000,000 to flood control was not an allocation in the ordinary sense, but merely a provision that its repayment might be deferred. Power, with a relatively small contribution from water storage, was to bear the burden of amortizing the entire investment.

(5) That if during the "period of amortization" there shall be "revenues in excess of the amount necessary to meet the periodical payments," 18¾% of such excess revenues shall be paid to each of the States of Arizona and Nevada. [Sec. 4 (b).]

> While not written into the Act, the legislative record shows unmistakably that this participa-

> tion was in lieu of taxes which the States might have collected, if the project had been undertaken through private capital. The amounts payable were entirely dependent on the existence of an excess, and as rates were subject to readjustment on a market value basis, the participation of the States was subject to fluctuations.

(6) That at the close of each fiscal year, the amount of money in the Colorado River Dam Fund in excess of the amount necessary for construction, operation and maintenance, and payment of interest, shall be covered into the Treasury as repayment of the Treasury advances. [Sec. 2 (e).]

(7) That after repayment to the United States of all advances, with interest, "charges shall be on such basis and the revenues derived therefrom shall be kept in a separate fund to be expended within the Colorado River Basin as may hereafter be prescribed by the Congress." [Sec. 5.]

(8) That the title to the dam, reservoir, plant and incidental works shall forever remain in the United States, and the United States shall, until otherwise provided by Congress, control, manage and operate the same, subject to the provision that the Secretary of the Interior may in his discretion enter into contracts of lease of a unit or units of the plant, with the right to generate electrical energy. [Sec. 6.]

History of the Power Contracts.

It also seems appropriate that we should briefly review the history of the making of contracts under the Project Act, and comment on some of the more important facts

and considerations which call for revision of the Project Act.

Pursuant to the Act, the Secretary of the Interior made regulations defining as "firm energy" all the energy which could be expected to be continuously available, and as "secondary energy" the additional quantities which might from time to time be available, but not continuously so. By such regulations, he also formulated the plan of treating the investment in the generating machinery and equipment separately from the rest of the investment in the dam and incidental works, and providing for the repayment of the investment in the machinery and equipment through rentals under leases of such machinery and equipment, and for the repayment of the other investment through charges for the use of falling water. It is important to note that this makes comparison of the costs of energy from the Boulder Project with the costs of energy from other projects difficult. In most projects, the rates are for generated electricity at the switchboard. At Boulder, they are for the privilege of using falling water to generate electricity, and the cost of amortizing the generating machinery and of its operation and maintenance must be added in order to arrive at a switchboard basis. The costs of constructing, operating and maintaining transmission lines must be added to arrive at costs at the distributing centers.

In 1930, the Secretary of the Interior obtained contracts for the use of falling water for the generation of all of the firm energy and for the leasing of all of the contemplated installation of machinery and equipment. However, one contract for 36% of all the firm energy was made in connection with a project for the construction of which bonds had not then been issued, and the Secretary ignored that contract in making his determinations and fixed a rate which he recognized was "in excess of that for which

the power can now be generated by the contracting parties by steam," and such that amortization within 50 years would be provided for out of the remaining 64% of the firm energy, if the rates so originally fixed were maintained throughout the 50-year period. Inasmuch as the project of this large power contractor was thereafter financed and built, the contract which had been ignored in making the computations became unquestionable. This meant that on the basis of the rates then fixed, revenues amounting roughly to 150% of the amount required for operation, maintenance and repayment of the advances within the 50 years were indicated. As the result of this, the belief became quite general in the States of Arizona and Nevada that the 18¾% participation of each of those States in excess revenues would be a very substantial amount. Likewise, particularly in the Upper Basin States, there existed the belief that within the 50 years a large sum would be available for the "separate fund" to be expended in the Colorado River Basin.

However, these expectations did not take into consideration the fact that the Secretary of the Interior in furnishing the figures which gave rise to those expectations had definitely stated that he could "make no guarantee that such prices will be maintained, as the act requires that they must be readjusted upward or downward * * * to accord with competitive prices at distributing points or competitive centers," or the fact that advances in the art of steam generation were pointing to a cut in the previously established rates when the first readjustment period should be reached in 1945. It is essential that these factors be borne in mind in considering those features of the proposed legislation which represent a compromise between the views of different groups in the negotiations which have led up to the proposal of the Adjustment Act.

Change in Power Policy.

Another basic reason for revision of the existing set-up is that in more recent Federal Power Projects, the Government has seen fit to adopt the policy of allocating or distributing the burdens of multiple-use projects to and among the several uses. It has departed from the principle of the Boulder Canyon Project Act, which burdens power with the cost of providing for flood control, navigation, river regulation, and the storage and delivery of water for irrigation and domestic use (save very minor help from one water storage contract). The proposed legislation effects some measure of harmonization with more recent policies.

Project Ownership and Profits.

The fundamental nature of the Boulder Dam financing must also be made clear.

Any agency undertaking a normal P. W. A. or R. F. C. project, which is constructed with Government funds, issues its bonds to secure the repayment of the loan. These bonds, in such case, are purchased by the Government. During the life of the bonds the borrower pays interest and installments of principal. But when the loan is repaid and the bonds retired, the borrower—such, for instance, as the Triborough Bridge in New York—is the owner of the project and the Government has no further interest in it. Not so here: when Boulder Dam has been completely paid for, the Government, and not the power contractors who are obligating themselves for the repayment of the advances, will own the entire project. The United States will have a going concern in good operating order, free of debt, with a probable life of several hundred years. In that sense, the dam itself represents a profit to the United States, inasmuch as the original investment, with interest on all of the advances, except the flood control

item, ordinarily non-reimbursable, will have been recovered in cash.

Also the interest rate of 4% fixed in the existing Project Act, while obviously not intended as a profit-making feature, would, if continued under present interest rate conditions, result in a very large profit to the Federal Government during the amortization period.

Basic Revisions Under the Proposed Adjustment Act.

The foregoing statement regarding the existing law and contracts, and of the facts bearing upon the need for legislation, we believe, furnishes sufficient background for the discussion of the basic revisions contemplated by the proposed Adjustment Act. We will, therefore, discuss these basic revisions in the following order:

I. The change of the rate basis from one fixed by "competitive conditions" to an amortization basis.

II. The proposed treatment of the $25,000,000 flood control allocation:
  (1) The deferment of principal;
  (2) The waiver of interest;
  (3) The designation of the flood control item as the first advance.

III. The reduction of interest:
  (1) During construction to the actual cost of borrowed money;
  (2) During amortization to 3%, or in the alternative, to a rate to be fixed through the issuance of refunding bonds.

IV. The commutation of payments to Arizona and Nevada.

V. The provision for the Colorado River Development Fund.

I.

Change of the Rate Basis From One Fixed by "Competitive Conditions" to an Amortization Basis.

Although Section 4 (b) of the Project Act required that the rate initially determined should be such as would in the opinion of the Secretary be:

> "* * * adequate in his judgment to insure payment of all expenses of operation and maintenance of said works incurred by the United States and the repayment, within fifty years from the date of the completion of said works, of all amounts advanced to the fund under subdivision (b) of Section 2 for such works, together with interest thereon made reimbursable under this act"

nevertheless Section 5 (a) provided that all power contracts:

> "* * * shall contain provisions whereby at the end of fifteen years from the date of their execution and every ten years thereafter, there shall be readjustment of the contract, upon the demand of either party thereto, either upward or downward as to price, as the Secretary of the Interior may find to be justified by competitive conditions at distributing points or competitive centers * * * "

These periodic adjustments, measured by competitive (i. e. steam generation) costs, and operating on a rate initially determined as adequate to recoup the initial investment, might produce an excess or a deficiency in revenues, and a lengthening or shortening of the amorti-

zation period of fifty years contemplated by the initial determination. In the event of excesses, 62½% was directed by Section 2 (b) to be applied on the flood control allocations of $25,000,000, which was made repayable solely out of such excesses, and 37½% to Arizona and Nevada, divided equally [Section 4 (b)]. After retirement of the flood control allocation, apparently the excess revenues theretofore applied to that purpose would be applied to accelerate amortization of the remainder of the investment by operation of Section 2 (e) of the act. Such acceleration would cut short the period during which the States of Arizona and Nevada would participate in excess revenues, since, under the Project Act, they were to receive such excess revenues only during the period of amortization. Contrariwise, a downward rate revision compelled by competitive conditions, if it should occur, would have a reverse effect; the States might receive no excess revenues, the flood control item with interest might be deferred, and conceivably the cost of steam generated power might drop so low as to force a rate which would not pay out the remainder of the investment within 50 years.

The first adjustment under the Project Act would occur in 1945. The trend of steam generation costs since 1930, when the contracts were written, has been steadily downward, with the result that if rates were revised in 1939 on the basis of the act, the resultant competitive rate would fall short of the rate required to amortize the investment, including flood control, within 50 years. Continued improvements in the art of generating energy by steam indicate that the result in 1945 would be similar. On the other hand, it is conceivable that during future periods measurably increased fuel cost would necessitate, temporarily at least, an increased competitive rate.

The new act proposes to eliminate the uncertainty to

the United States, the States and the power contractors, resulting from a competitive rate, by substituting a rate based on actual amortization requirements, plus certain other charges referred to in later paragraphs. In this respect, the result approximates that obtaining on projects financed by private capital: that is, a municipality or a power company installing a hydro system knows in advance, within reasonable limits, over the life of the installation, what the cost of power from that source will be, and can regulate the timing and extent of its investment in additional steam capacity, or other hydro capacity, accordingly. Conversely, the bondholders (in this case, the United States) whose funds finance such a hydro investment are assured repayment on a fixed basis, not affected by the fluctuating value of the plant's output as compared with the output of alternative sources of power. Legislation controlling the newer projects, particularly T.V.A., Bonneville and Fort Peck, has not adopted nor continued the competitive rate theory.

The amortization basis adopted by the Adjustment Act is this: That the charges for energy, together with relatively minor revenues from the storage of water, shall be such as to repay within approximately 50 years the Government's investment, other than in machinery and equipment, with interest. The recoupment of the investment in machinery and equipment, as explained in later paragraphs, is provided for by rentals and not by energy charges. The rate of interest is discussed in detail in subsequent paragraphs. The investment is considered to exclude, for the purpose of rate determination during the 50-year period, the $25,000,000 allocated to flood control by the Project Act, and interest on that sum is likewise excluded. The treatment and method of recoupment of the flood control allocation are likewise treated in detail below.

II.

The Proposed Treatment of the $25,000,000 Flood Control Allocation.

The Project Act [Section 2 (b)] provides that:

> "* * * the sum of $25,000,000 shall be allocated to flood control and shall be repaid to the United States out of 62½ per centum of revenues, if any, in excess of the amount necessary to meet periodical payments during the period of amortization, as provided in Section 4 of this act. If said sum of $25,000,000 is not repaid in full during the period of amortization, then 62½ per centum of all net revenues shall be applied to payment of the remainder."

Interest at the rate of 4% is charged upon all advances, including the flood control allocation.

The proposed Act would make three adjustments with regard to the flood control allocation:

(1) DEFERMENT OF PRINCIPAL.

The proposed Adjustment Act does not change the amount of the flood control allocation. The existing Project Act contemplated that repayment of the allocation *might* be deferred. The proposed act provides that it *shall* be deferred until after the repayment of the other advances.

It is important to note that the Boulder Dam, like many other dams constructed by the Federal Government, is a multiple-use dam.

Under expressed provisions of the Project Act hereinabove quoted Boulder Dam was erected primarily as a flood control and reclamation project, and yet power from

the project is burdened with the repayment (aided by a relatively small contribution from water sales and incidental sources) of all the advances made primarily for other purposes. The Government has done flood control work on rivers throughout substantially its entire history, but the proponents of the Adjustment Act are not aware of any case in which expenditures for flood control have been made reimbursable. If precedent were to be followed, the flood control allocation should be made *non-reimbursable,* instead of merely *deferred,* but the proponents are not asking this.

(2) WAIVER OF INTEREST.

The provision that the deferred repayment shall be *without interest* is based upon the Reclamation Law, which contemplates repayment of the principal without interest. Section 14 of the existing Project Act expressly provides that it

> "shall be deemed a supplement to the reclamation law, which said reclamation law shall govern the construction, operation, and management of the works herein authorized, except as otherwise herein provided."

If the precedent of the Reclamation Law were followed throughout, *all* the advances would be made reimbursable without interest. The proponents merely ask that the flood control allocation, ordinarily a non-reimbursable item, should be reimbursable at a future time, without interest.

In the case of the Bonneville, Fort Peck and T.V.A. Projects, only that portion of the investment deemed to have been incurred for power is charged against power, and the balance of the investment is charged to uses other than power, and is not required to be repaid,

i. e., is written off. In the case of Bonneville, power is charged with only about 32% of the investment and at T.V.A. with about 52%. The Fort Peck figures are not available. At Boulder, the entire cost of the dam and electric works is charged by the Project Act against power, subject only to a contribution, probably not exceeding 4% or 5% of the whole, from water sales and other miscellaneous charges.

(3) DESIGNATION OF THE FLOOD CONTROL ITEM AS THE FIRST ADVANCE.

The new Act provides that the $25,000,000 flood control allocation shall be deemed the first money spent on construction. This has the effect of minimizing interest during construction, inasmuch as the first advance, upon this premise, would be interest free. Aside from the arguments advanced above with regard to the justification for moderate concessions to this Project with regard to flood control, in order to overcome a part of the margin written into later legislation in favor of later projects, the assignment of the flood control allocation to the first advances has historical justification. Boulder Dam was erected primarily as a flood control and reclamation project. The figure of $25,000,000 was derived from estimates as to the cost of constructing a low dam for flood control. A greater investment was made in order to provide storage for other purposes and to enable the generation of electrical energy to make the project self-supporting. There was a considerable movement in Congress to restrict the investment to $30,000,000 or $40,000,000 for flood control alone, and to make it non-reimbursable. The assumption, made in the proposed Act, that the first expenditures be allocated to flood control, is in line with the legislative history of the Project Act.

III.

Interest Rate.

The proposed Act provides that the rate of interest charged during periods of construction shall be computed at the cost of money borrowed by the United States during such periods, to be determined by the Secretary of the Treasury, and that all other interest shall be either (1) at the rate of 3 per cent per annum, or (2) at a rate to be determined by the immediate issuance by the Treasury of a fifty-year refunding bond issue, and, pending such issuance, at actual cost, plus a margin to cover incidental expense. The following is submitted in support of those suggestions:

(1) Interest during construction.

The subject of interest during construction is distinct from the question of subsequently accruing interest. Under universally recognized principles of accounting, interest during construction is a capital investment, as distinguished from an expense item. Money used during construction has a value, and that value is as much a part of the cost of constructing any project as the cost of the concrete or other materials used. In the present case, interest during construction, added to the other and larger costs of construction, makes up the principal of the investment.

This element of cost is as definitely ascertainable as the cost of any of the materials or labor entering into the construction. Interest during construction is necessarily interest for a period which has already expired at the time the interest is computed, and there is not the element of uncertainty as to what money values will be hereafter, as there is in the case of interest accruing in the future.

There is no more justification for including interest during construction at any rate higher than the actual cost of money during the period involved, than there would be for the inclusion of the various materials and labor at a higher cost than that actually paid by the Government.

The Government itself recognizes this principle in the regulations of the Federal Power Commission, relating to the construction of power projects under license from that Commission, which require, so far as borrowed funds are concerned, that there shall be charged as interest during construction the net cost of such funds used for construction purposes.

We understand that under the Bonneville project, a distinction is made between interest during construction and subsequent interest similar to that proposed here, and on a basis more favorable to that project.

(2) INTEREST AFTER CONSTRUCTION.

As to interest during the period of amortization, in brief, the same opportunity is asked for this Project as if the Project had been financed on private credit: viz. the opportunity to refund at the better rate of interest now prevailing in the open market.

The power allottees are nine in number, including the two States of Arizona and Nevada, the four cities of Los Angeles, Pasadena, Glendale and Burbank, in California, The Metropolitan Water District of Southern California (which, loosely speaking, is a federation of thirteen cities), and two private power companies, the Southern California Edison Company, Ltd., and the Nevada-California Electric Corporation. If, instead of these diverse and numerous interests acting severally, an assumed "Boulder Dam Power Authority" (analogous to the New York Power Authority, in function, and to the Port of New York Authority in inter-state aspect) had

been organized, and had contracted for all the Boulder power, it would now be feasible for that assumed Authority to issue and sell, on the open market, at an interest rate comparable to that suggested here, bonds to fund the aggregate obligation. It cannot be assumed that the Government would refuse to assent to that procedure.

The nine power contractors cannot follow that procedure because of their diversity and because, notwithstanding the fact that there are firm obligations for all the firm power, there are elements which make it impossible to determine in advance in just what proportion the ultimate cost of repayment will be borne by the several allottees. It does not seem unreasonable to suggest that the Government, having undertaken to finance this project, should be willing to consent to what amounts to a refunding operation at a lower interest rate, such as would have been available to the power contractor if the assumed Authority could have been created.

The proposal for a lower rate, determined by the actual cost of money, does not involve a loss to the Government unless it is assumed that the rate ought to be fixed above cost to yield a financing profit.

(a) The interest rate should not exceed cost of money, determined in whatever manner may be most equitable, plus a reasonable handling charge.

Provisions of the Project Act quoted above show that the dam is a multiple-use dam, with power made subordinate to all the other uses. None of the primary functions of the Dam ordinarily involve interest-bearing investments; as to some of them, the Government customarily receives no reimbursement of principal. Thus, as to river regulation, improvement of navigation and flood control, witness the Flood Control Acts of 1936 [Act of June 22, 1936, 49 Stat. 1570, 33 U. S. C. A. ch. 15. particu-

larly Sec. 701 A] and 1938 [Act of June 28, 1938, 52 Stat. 1215, 33 U. S. C. A. ch. 15] which do not require that the Federal investment be self-liquidating; the Bonneville Project Act, [Act of Aug. 20, 1937, 50 Stat. 735, 16 U. S. C. A. Sec. 832 (b)] which specifically excludes navigation facilities, and their proportionate share of jointly used facilities, from the investment which power is required to repay; the Tennessee Valley Authority Act [Act of May 18, 1933, 48 Stat. 66] and the Fort Peck Project Act [Act of May 18, 1938, 52 Stat. 405, 16 U. S. C. A, Sec. 833 (c)] which do likewise. Other examples, too numerous to cite, show that the Federal Government does not even predicate its investments in river regulation, improvement of navigation and flood control on the assurance of repayment, much less on profit. As to irrigation, domestic uses and "satisfaction of present perfected rights" (i. e., water rights), the Reclamation Act has been construed to authorize Federal investments repayable without interest; and the Boulder Canyon Project Act, in Section 14, recites, as above noted, that:

> "This Act shall be deemed a supplement to the reclamation law. which said reclamation law shall govern the construction, operation, and management of the works herein authorized, except as otherwise herein provided."

When, therefore, the Act provided in Section 1 for "the generation of electrical energy as a means of making the project herein authorized a self-supporting and financially solvent undertaking," it is reasonable to assume that when it said "*self*-supporting" it meant that if power were burdened with reimbursement of the whole investment, that was enough, without asking it to yield, in addition, a financing profit by way of an interest charge in excess of

cost, for use in supporting other unrelated Governmental activities.

The underlying purpose clearly was that the Nation should benefit *indirectly* through the development and utilization of natural resources, and the prevention of floods, and not that there should be any *direct* cash profit.

(b) A rate of 3% approximates the probable actual cost of money during the period of amortization, plus a handling charge.

The rate may be determined in either of two ways, and neither method is inconsistent with the result reached on recent comparable projects. Thus:

(i) The Government is in a position to give itself complete protection through the simple expedient of issuing bonds in an amount approximating the advances which are to be reimbursable with interest, maturing serially in amounts approximating as nearly as may be the rate of repayment of the advances contemplated by the plan. This, in effect, refunds the advances above mentioned. If sufficient authority for this procedure is not to be found in existing laws, it would be a simple matter to include in the proposed legislation the necessary authority, and to that end an alternative Section 8, granting such authority, has been appended to the draft of the proposed act. This alternative provision contemplates that the rate of interest to be provided for through the rates charged to the contractors shall be 1/10 of 1% higher than the actual average cost of the borrowed money. By this procedure the Government, in effect, would be earmarking the proceeds of such bonds as the money representing the advances, and would be assured that the cost of such money would never exceed, but on the contrary would be less than, the interest payable out of the charges collected from the power

contractors and other miscellaneous revenues of the project. The proceeds of the bond issue would be used to refund existing obligations and so would not increase the national debt. Precedent for an interest rate based on the actual cost of money is found in the Rural Electrification Act [Act of May 20, 1936, 49 Stat. 1365, 7 U. S. C. A. 904] and the Housing Act of 1937 [Act of Sept. 1, 1937, 50 Stat. 891, 42 U. S. C. A. Sec. 1409]. As to precedents for bond issues: the Tennessee Valley Authority is authorized to require the Treasury to issue bonds on the credit of the United States, at a rate not exceeding 3½% and maturing in 50 years, under the Act of May 18, 1933 [48 Stat. 66, 16 U. S. C. A. Sec. 831 (n)] to provide funds to construct power projects, and it has similar authority under the Act of August 31, 1935 [49 Stat. 1078, 16 U. S. C. A. Sec. 831 (n–1)], the proceeds to be used to make loans to municipalities to acquire power projects. We understand that under the first of these provisions money has been made available at the rate of 2½%, and that under the second of these provisions money has been made available at the rate of 2-1/8%.

(ii) A flat rate of 3% is in line with the assumptions of future cost of money made in recent legislation. Thus a rate of 3% is established in the Act of July 22, 1937 [50 Stat. 523, 7 U. S. C. A. Sec. 1003 (b–2)] on loans for the purchase of farms or equipment, with maturities up to 40 years. The same rate is set under the Social Security Act [Act of August 14, 1935, 49 Stat. 620, 42 U. S. C. A. 401] on the reserve account which is required to be invested in Government bonds. A rate of 3½% is fixed by the Merchant Marine Act of 1936 [Act of June 23, 1938, 52 Stat. 956, 46 U. S. C. A. Sec. 1152 (c)] on the non-subsidized part of ship construction costs, with maturities of

20 years, notwithstanding the fact that the collateral is subject to the perils of the sea.

The average yield of Government securities at present outstanding, based on present prevailing market prices, is approximately 2% per annum, with the average cost to the Government on all of its securities presently outstanding approximately 2.6% per annum. United States Treasury 2¾% bonds, callable December 15, 1960, and maturing December 15, 1965, are quoted presently at 104 and return a yield to the holder to the call date of approximately 2.50% per annum and to the maturity date 2.55% per annum.

(iii) A rate of 3% on the secured investment in Boulder Dam is consistent with a rate of 3½% on the unsecured investments in the Bonneville and Fort Peck Projects.

The Bonneville Project Act [Act of August 20, 1937, 50 Stat. 735, Sec. 7, 16 U. S. C. A., Sec. 832 (b)] provides that:

> "Rate schedules shall be drawn having regard to the recovery (upon the basis of the application of such rate schedules to the capacity of the electric facilities of Bonneville Project) of the cost of producing and transmitting such electric energy, including the amortization of the capital investment over a reasonable period of years. Rate schedules shall be based upon an allocation of costs made by the Federal Power Commission."

The Commission has allocated approximately 32 per cent of the ultimate cost to power. It has not fixed an interest rate. The Administrator has issued a press release indicating that the rate is to be 3½ per cent. No information is available whether such a rate has been formally promulgated either by the Administrator, the Secretary of the Interior (to whom he reports) or the

Federal Power Commission. The proposed rate schedules are required to be predicated on "capacity" of the plant. As the initial installation is less than the full capacity, the rate is not required to be such as will yield amortization requirements on even as much as 32% of the investment by sale of the energy produced from the initial installation. The language of the Fort Peck Project Act [Act of May 18, 1938, 52 Stat. 405, 16 U. S. C. A., Sec. 833 (c)] is identical with that quoted above with reference to the Bonneville Project. However, schedules of rates and charges are prepared by the Bureau of Reclamation rather than by an Administrator. No information is available as to the allocation of costs nor as to action, if any, taken to formally establish an interest rate. Both the Bonneville and Fort Peck statutes are silent as to interest unless a requirement of "interest" is implicit in the requirement of "amortization of the capital investment over a reasonable period of years."

One of the important factors in fixing an interest rate is the element of risk involved. In the case of the Bonneville and Fort Peck and other projects, the Federal Government has seen fit to take the risk of finding customers for the energy from time to time as it may be able to do so, which carries with it the very substantial risk of losing such customers. Changing economic conditions, including the cheapening of competitive sources of power, may draw away customers not bound by long-tern contracts. In the case of the Boulder Project, the act specifically directed that construction should not be undertaken until the Secretary of the Interior had obtained contracts adequate in his judgment to insure the payment of all expenses of operation and maintenance and the repayment within 50 years of the amounts advanced, with interest thereon. In other words, in the case of the Boulder Project, unlike other

more recent projects, the Government insisted upon an assured market for its product for a period sufficient in the judgment of the Secretary to insure full reimbursement. Firm contracts now outstanding assure the sale of every kilowatt hour of firm energy which the plant can produce for 50 years. There is, therefore, a difference between the Boulder Project and other projects closely akin to the difference between a secured and an unsecured loan. In the one case the Government is proceeding on the hope that as a vendor in the open market, in competition with steam-generation, it *may* be able to earn, say, a 3½% return on the portion of its investment allocated to power. In the other it has contracts *assuring* it a market for the product for 50 years, and, under the proposed legislation, will have contracts *assuring* it the repayment of its advances for all the multiple purposes (plus the ownership of a project fully paid for by the power contractors) with a 3% return, subject to the provision that the flood control advance shall be deferred and repaid without interest.

In short, if a rate of 3½% or more at other "unsecured" projects is proportionate to the hazard on the investment sought to be recouped there (putting to one side the observation that 68% of the investment at Bonneville is written off before any attempt at recoupment is required), then a rate of 3% or lower is enough at Boulder, backed by firm contracts for 100% of the firm power.

IV.

THE COMMUTATION OF PAYMENTS TO ARIZONA AND NEVADA.

Section 4 (b) of the existing Project Act directs that:

> "If during the period of amortization the Secretary of the Interior shall receive revenues in excess of the amount necessary to meet the

> periodical payments to the United States as provided in the contract, or contracts, executed under this act, then, immediately after the settlement of such periodical payments, he shall pay to the State of Arizona 18¾ per centum of such excess revenues and to the State of Nevada 18-3/4 per centum of such excess revenues."

It was unmistakably the purpose of the Act to compensate the States of Arizona and Nevada for benefits they would have received if the project had been constructed by private capital. These benefits, consisting of taxes upon the portion of the project which is federally owned and other revenues that would have been derived from lands and real estate related to and connected therewith, were forever lost to the States by reason of the Government taking possession of the dam and reservoir sites and a large area of adjacent lands.

There is much in the legislative record bearing upon this matter which has established the right of the States to revenue in lieu of taxes. The consent of the Senators and Congressman from Nevada to the passage of the Project Act was not obtained until Section 4, which was designed to make such revenue possible, had been made a part of that Act. Presumably the Act could have been passed without the Congressional aid of Nevada, but the right of the two States to revenue was recognized, and the provision was agreed to and included in the Act. The proposed commutation provides a method acceptable to all of the States in the Colorado River Basin and to the power contractors, whereby the purpose of the original Act may be accomplished by the Adjustment Act.

Studies made by representatives of the State of Nevada indicated that if the project had been constructed by private capital the prevailing tax rates would have yielded in excess of $600,000 annually to that State. At recent

hearings representatives of Nevada presented evidence to the effect that miscellaneous revenues which would have been derived through the value of adjacent lands withdrawn by the Government would have substantially increased the sum.

Nevada had little to gain from the project by flood control, reclamation or irrigation, but fully realized the value of the site because of former negotiations in regard to it with private interests.

A false conception of the facts led to the belief in Nevada that, under the workings of the original Act, the States of Arizona and Nevada would each receive, as its 18¾% of the surplus earnings of the Project, the sum of at least $600,000 per year. It was later realized that, with revision of rates as required by the Project Act at stated intervals, payments to the States would be uncertain as to time and problematical as to amount.

Since that legislation was enacted the United States has embarked upon an extensive power and water development program, and is constructing several other large hydro-electric projects comparable with Boulder Dam. Competition with these projects, and also with present reduced steam costs, indicates a lowering of the Boulder rates at the time intervals provided by the Act, to a level at which little or no surplus can be accumulated. If the present Act remained unchanged, the rates now in force for firm and secondary energy would probably produce excess revenues during certain of the early years. However, the first rate revision (authorized for 1945 by Section 5 (a) of the Project Act) precludes certainty that any excess revenues will continue to be received or that any payments to the States can be made after 1945.

The Adjustment Act proposes to fix the rates on an amortization basis instead of on the fluctuating basis of competitive conditions. This would automatically elimin-

ate all "excess revenues," unless coupled with a provision for the creation of an excess, and in order to carry out the intent of the original Act it becomes essential that such a provision be included. The proposed Adjustment Act provides for the payment of a fixed sum of $300,000 per annum to each of the States of Arizona and Nevada in commutation of their percentage participation under the existing Act. This figure was arrived at by negotiations between representatives of the power contractors and of the States of Arizona and Nevada. The official delegates of the States, in consenting to this commutation, have done so in a spirit of cooperation with the Upper Basin States and the power contractors in order to effect lower rates to ultimate consumers and agree upon a program fair and acceptable to all interests. The proposed commutation, if made available, has been authorized by the 1939 legislature of Nevada. The proposal has been approved by the Colorado River Commission of Arizona.

The proposed provision for making these commutation payments does not in any manner detrimentally affect the Federal Treasury inasmuch as they are payments made in addition to the amortization payments to the Treasury, and the rates for falling water are required to be so fixed as to produce required revenues.

The commutation provision has the effect of carrying out the intent of the Project Act, although the amounts payable to these States will be much less than they had expected under the existing law.

V.

Payment to the Colorado River Development Fund.

The proposed Act obligates the Colorado River Dam Fund to pay into another fund in the Treasury, to be designated as the Colorado River Development Fund, $500,000 for each year of operation, 1940 to 1987 inclusive.

It directs that rates for falling water shall be so fixed as to make provision for said payments in addition to all other requirements. The Development Fund is to be used for Federal expenditures on water utilization projects in the Colorado River Basin.

Section 5 of the Project Act provides that:

> "After the repayments to the United States of all money advanced with interest, charges shall be on such basis and the revenues derived therefrom shall be kept in a separate fund to be expended within the Colorado River Basin as may hereafter be prescribed by the Congress."

It has been quite generally believed in the Upper Basin States that this provision of the existing law assured the accrual of very substantial sums to the separate fund within the 50-year life of the existing contracts. The power contractors, on the other hand, have believed that the readjustment in 1945 would result in such a lowering of rates that there could be no accruals to the separate fund within the 50-year period. These conflicting views have resulted in a compromise understanding as between the States of the Basin and the power contractors, that provision shall be made in the rates for the annual payments above mentioned.

Contrary to adversely affecting the interest of the United States, the provision for this fund is a benefit to the Government.

It should be borne in mind that the payments to the Development Fund, which will aggregate $24,000,000, are not payments to any of the States. They are payments to the Government of sums derived from added charges in the power rates which must be utilized in aid of the Government's financing of reclamation work throughout the Basin. Treasury expenditures of ap-

proximately $200,000 a year have been made for several years past to carry on surveys and investigations in the Colorado River Basin, in addition to actual construction. The Federal Government has recognized for many years that reclamation work is a proper function of the Federal Government and in the public interest of the United States. The accretions to the Reclamation Fund in the fiscal year ending June 30, 1938 aggregated $3,496,543.26 [Annual Report of the Secretary of the Interior, 1938, p. 59], of which about half came from California. On this basis, the annual payment into the Development Fund, derived from power sales, will equal one-seventh of the accretions to the Reclamation Fund during the fiscal year 1938. This payment will add a new source of income for reclamation purposes greater than the combined oil royalties and public land sales in any single State save Wyoming and California.

The use of this fund will result in much desirable development of the Colorado River Basin. Such development is in accord with the national reclamation program. General attention is now focused on matters relating to national defense. Availability of a large variety of war materials will be further advanced by the development of the Basin, thus directly aiding the defense program.

It should also be borne in mind that these payments for Federal use do not diminish the amortization revenue to the Treasury, but are in addition to it. The $24,000,000 received by the Treasury for the Development Fund during the fifty-year period is virtually equal in amount to the $25,000,000 flood control allocation the repayment of which is deferred until after that period. Except for interest on the flood control allocation, which is proposed to be waived, the Treasury will thus have received back, with interest, at the end of fifty years, an amount equal to all of its investment minus one million dollars, and will in effect

have earmarked for use in reclamation work $24,000,000 of the investment so recovered. Thereafter, within a relatively short period, it will receive the full $25,000,000 flood control allocation, the repayment of which is directed to commence immediately on retirement of the balance of the investment.

Division Two.

Minor Revisions and Features Incidental to the Basic Revisions.

It seems appropriate to supplement the foregoing discussion by an explanation of certain features of the proposed legislation, which are of importance subordinate to the basic matters hereinabove discussed.

The present discussion will cover:

I. The determination and readjustment of rates.
II. The repayment of the Treasury advances.
III. The provisions relating to machinery and equipment.
IV. The retroactive aspect of the plan.
V. The provisions for readvances.
VI. The provisions for supplemental contracts.
VII. Miscellaneous provisions.

I.

The Determination and Readjustment of Rates.

As hereinabove explained, one of the basic revisions contemplated by the Adjustment Act is the placing of the rates on an amortization basis, instead of on a competitive basis. However, the basis proposed is not strictly limited to amortization. It contemplates that the rates shall result in revenues which, with certain other available revenues, will provide more than the amortization re-

quirements, that is to say, not only funds sufficient for specified expenses of operation, maintenance and replacements, and for the amortization of the investment, with interest, but also funds sufficient for the above mentioned payments of $300,000 annually for 50 years to each of the States of Nevada and Arizona and $500,000 annually for 48 years to the Colorado River Development Fund. The basis might be termed an "amortization plus" basis.

Procedure for Original Rate Determination.

The proposed Adjustment Act provides [Sections 2 and 3] that the Secretary of the Interior shall determine and promulgate rates. The original determination is to be on the basis of full performance of all the contracts for firm energy as they existed on July 10, 1938 (a date which includes all such contracts), and on the basis of findings as to other basic elements. The rates are to be such as will yield for the period of 50 years from June 1, 1937 (the date when regular operation, as distinguished from certain interim operation, of the plant began) to May 31, 1987 (the date of expiration of the existing main contracts) revenues which, together with revenues from the storage and delivery of water during that period, and any available revenues received prior to June 1, 1937, will be sufficient, but not more than sufficient, to provide costs of operation, maintenance and replacements, on the basis hereinafter explained, plus the amounts payable to the States of Arizona and Nevada and to the Colorado River Development Fund, and to repay the advances for the construction of the project (excluding advances for leased machinery, which are repayable out of the rentals thereof, and also excluding the $25,000,000 allocated to flood control, which is deferred) within said period of 50 years, with interest.

It should be noted that the period stated is a fixed and

definite period of 50 years, notwithstanding the fact that, as hereinafter explained, the actual period of amortization may be slightly shorter or longer. For the purpose of the original determination of rates, a fixed period is necessary for two reasons, viz., first, that a fixed period must be assumed in order to compute the rates, and second, that the existing contracts expire with the termination of the 50-year period. At that time, the Government will have a free hand to determine what the future basis of rates should be, and neither the existing nor proposed legislation limits the exercise of that power.

Findings.

The proposed Act requires that findings shall be made respecting certain elements which enter into rate fixing, such as the quantities of secondary energy estimated to be available and usable, and the revenues from storage and delivery of water to The Metropolitan Water District of Southern California, and possibly other users, and also as to the estimated amounts required for operation, maintenance and replacements as next commented on.

Under the existing Project Act, it was contemplated that the costs of operation and maintenance ("maintenance" being defined as including "keeping the works in good operating condition" and thus including replacements due to ordinary wear and tear) should come out of the revenues, this being assured by the provision that the construction should not proceed until contracts had been entered into, adequate, in the judgment of the Secretary of the Interior, to provide revenues sufficient for operation, maintenance and amortization. However, under that act, variations of such costs would not cause variations of *rates* (because rates were based on competitive conditions), but would be reflected in variations of the amortization period.

The proposed Adjustment Act likewise contemplates that these items should come out of the revenues and avoids variations in rates because of possible fluctuations in such items of cost by providing that the amounts to be paid through rates to cover these cost elements shall be fixed and definite, and the rates not subject to adjustment on account of variations therein.

There are practical advantages to both the Government and the power contractors in this arrangement. First, it will remove the incentive the power contractors would otherwise have to scrutinize and criticize expenditures made by the Government for operation, maintenance and replacements of the dam, with consequent continual controversy as to whether the amounts expended for these purposes were necessary and reasonable; second, it will enable the power contractors to more accurately determine in advance their contractual obligations for the use of falling water for the generation of energy.

Any other basis for dealing with these items would command the constant interest of the power contractors in the activities of the Government respecting the manner and extent to which funds were expended for such purposes.

Accordingly, the proposed Adjustment Act has been so drawn as to provide that, upon the basis of the advice and recommendations of an expert or experts, the Secretary of the Interior shall make estimates of the costs of operation, maintenace and replacements, and that the rates shall be based upon such estimates throughout the 50-year period, thus obviating controversy, and causing whatever slight variation there may be to be reflected in hastening or retarding amortization, as under the existing law. This provision has been so drawn as to contemplate that the estimates of costs of operation and maintenance shall be "net" estimates, that is to say, that items of

receipts which are directly related to costs of operation and maintenance (as for example rentals of houses provided for employees) shall be offset against the expenses of operation and maintenance, and the estimated net balances used for the purpose of fixing the rates. The fixing of these costs means that in a sense the Government and the power contractors alike take the chances as to whether in actual experience the costs will be greater or less than estimates. In another sense the Government takes no chance in making the change, and this for two reasons In the first place, the estimates are to be made upon the advice and recommendation of an expert, selected by the Secretary of the Interior, and in the second place, the contractors will be obligated to take power to the end of the 50-year period at rates fixed under the act, and so if the actual net cost of operation, maintenance and replacements should be *less* than the amounts they will provide under the rates, amortization may be completed before the end of the 50 years, while, if the cost should *exceed* the estimates, the Government will have the dam and plant substantially free from debt, and can recoup excess costs out of subsequent revenues, just as it would under the present law.

Periodic Readjustments.

The proposed Adjustment Act contemplates that the rates originally determined will remain constant throughout the 50-year period, subject only to periodic readjustments to reflect specified variations. These periodic readjustments will be of two classes. The readjustments of the first class will be in 1945, and every five years thereafter, and the readjustments of the second class in 1955, and every ten years thereafter. For convenience, the readjustments will be referred to as the five-year and ten-year readjustments.

"Five-year" Adjustments.

The five-year readjustments are to cover five possible variations, four of them being variations of receipts, and one of the amount invested. Some of these variations are unlikely to occur, but it is proper that provisions should be made to reflect them, if by chance they should do so. The variations so to be reflected are the following:

(1) Variations in revenues from the storage and delivery of water, which, unless unforeseen contracts should be made, means payments received from The Metropolitan Water District of Southern California for such storage and delivery. Some variation in this item is probable, but will undoubtedly be slight.

(2) Variations in revenues if any power contractor should refuse to enter into a supplemental contract under the new act, which is believed to be highly improbable.

(3) Variations in available funds, representing net receipts of money from sources other than those which are to be taken into consideration in determining the net costs of operation and maintenance. No such receipts are now foreseen, but this provision would permit unexpected revenues, if any should be received, to contribute to the amortization.

(4) Variations in the amortization requirements, due to additional advances, which may hereafter be made under the authority of the Project Act, for further construction, which will be repayable, with interest.

"Ten-year" Adjustments.

The ten-year readjustments are to cover variations of revenue due to the quantities of energy other than the firm energy which the power contractors are obligated to take under the contracts as they existed on July 10, 1938,

consisting almost wholly of the secondary energy. Inasmuch as the secondary energy is in its nature a variable thing, the proposed Adjustment Act proceeds on the theory that readjustments based on the variation thereof should be at less frequent intervals, so as to reflect long-time trends rather than seasonal or short-term variations. It is contemplated that excesses or deficits above or below the estimated use of such energy will be compensated for by corresponding changes of rates at the ten-year intervals, subject to one exception, namely: that if over the period from June 1, 1937, to June 1, 1955, and to the date of each subsequent ten-year readjustment, respectively, the river flow should have varied more than 10% from what is now expected, then any excesses or deficits in the use of secondary energy which the Secretary of the Interior may find to be attributable to the fact that the stream flow has varied more than 10% are not to be reflected in readjustments of the rates. The effect of this, of course, will be that there may be slightly more or less money available for amortization than now estimated, and that, therefore, amortization may be completed slightly sooner or slightly later than the expiration of the 50-year term. The underlying thought is that the parties are contracting on the basis of a reasonable expectancy as to what secondary energy will be available, and that if through climatic changes there should be a material departure from that reasonable expectancy, whether by way of excesses or deficits, the reflection should be in the amortization period, and not in rates. It will be noted that under the existing Project Act, all variations of secondary energy would be reflected in extending or shortening the amortization period, while under the proposed Adjustment Act all such variations will be reflected in rates, without affecting the amortization period, except such variations as the Secretary of the Interior may find to be attributable to such a

change of stream flow as may fairly be said to be an Act of God. This feature of readjustments based on variations of secondary energy, while a complex one, is of relatively minor importance, because the amount of revenue from such energy is estimated to be only approximately 5% of the total revenue, and variations in secondary energy other than those to be reflected in the rates are very improbable.

Acts of God and of the Public Enemy.

It will be noted that such matters as interruptions of revenue through Act of God or the public enemy or through defaults of the United States are not included in the list of variations which are to be reflected in readjustments of rates. These are risks which the contractors did not assume under the existing Project Act. An amortization plan which contemplated that rates should be adjusted for such causes might place wholly unreasonable burdens upon the power contractors and their consumers. This can be illustrated by assuming that within the five-year period from 1980 to 1985, the plant should be shut down for several years as the result of an Act of God. An amortization plan which threw the risk of such a major catastrophe on the power contractors would mean that during the final two years of their contracts, following the rate readjustment of 1985, they would have to pay rates for the energy which they received, not only equal to what it was worth, but surcharged with an additional amount sufficient to make up for a deficit, incurred during the preceding period, of possibly several times as much as the value of the energy. In other words, the power contractors would in effect be required to pay for the energy they *did not* receive, as well as for the energy they *did* receive. On the other hand, permitting such unforeseen and im-

probable eventualities to extend the amortization period will leave the Government in no different position from that in which it would be under the existing Project Act, and free to recoup the unamortized deficit, with interest, out of future revenues.

II.

The Repayment of the Treasury Advances.

Section 2 (e) of the Project Act provides that at the close of each fiscal year, the amount of money in the Colorado River Dam Fund in excess of the amount necessary for construction, operation, maintenance and the payment of interest should be covered into the Treasury as repayment of the advances made under the act. It thus appears that under the existing law, the amount of the annual payments on the advances is not a fixed and definite amount, and the proposed Adjustment Act retains this feature in substance by providing [Section 9 (d)] that the advances (other than advances for leased machinery and equipment, which are otherwise provided for, and the $25,000,000 flood control item, which is deferred), and interest thereon, shall be repaid in annual installments, each consisting of the balance of revenues remaining in the fund as of the close of the year of operation for which it is made, after paying or making provision for the payment of all other sums payable under the provisions of the act from said fund with respect to the year of operation for which such installment is paid.

This method does not mean that the payments will be haphazard or widely fluctuating. Analysis will show that it is the only logical method to follow. There are two conditions which make the fixing of a uniform or rigidly fixed payment impracticable. The first is that under the

existing regulations and contracts, the amount of firm energy decreases gradually over the period, because of contemplated additional diversions of water up-stream from the dam, so that the revenues will be somewhat greater in the earlier years than in the later years, and logically the repayments should be correspondingly graduated. The second reason is that while by far the greater part of the revenues will be fixed and determinable, the revenues derived from the sale of secondary energy must necessarily be fluctuating, inasmuch as the secondary energy is that energy which can be generated from water which may be available in years of plenty, but which will disappear in some years. The revenues from the sale and delivery of water are also not determinable as they will depend on the consumption of water, which will not be constant. While these variable revenues are not of such magnitude as to make any very wide fluctuations in the amounts available for repayment, nevertheless, they are of sufficient magnitude so that it is not practicable to rigidly fix a schedule of repayments. If any such attempt were made, logic would require that it should be coupled with a provision that if more money were available in any year than the amount of the fixed payments, it could also be applied on the advances, so as to stop the running of interest, and that if less were available than such fixed amount, the deficit should carry interest until paid. The net result would be that although there might be the appearance of fixed amounts, in practice there would be variations through overpayments or underpayments. The same result is reached in a much simpler way through providing that rates shall be fixed, which, on a basis of estimates, will accomplish the amortization in 50 years, subject to periodic correction, and let the amount of the payment to be made in each year be controlled by the balance available.

III.

THE PROVISIONS RELATING TO MACHINERY AND EQUIPMENT.

The existing Project Act [Section 6] vested the Secretary of the Interior with authority to operate the power plants or to make leases thereof. He saw fit to do the latter, and to provide a system of rentals to be paid by The City of Los Angeles and the Southern California Edison Company Ltd., as lessees of separate parts of the plant, through which rentals the cost of the generating machinery and equipment should be amortized. This was coupled with provisions for the Government collecting from contractors other than the lessees, generating charges which should be credited on the rentals, thus reimbursing the lessees for the amortization charges properly allocable to contractors for whom they were generating agents. The original contracts provided that this amortization should be over a ten-year period, but by supplemental contracts the amortization of the machinery and equipment has been placed on the basis of amortization of the cost by May 31, 1987.

Necessity for Uniform Amortization Periods on Machinery.

It was realized at the time these supplemental contracts were made that an element of discrimination entered into the set-up in that while all the leases and contracts will *expire* on May 31, 1987, they *begin* at different times, so that some of the contracts are for 50 years, some for 49 years and some for 47 years, and as to the States of Arizona and Nevada, the contracts may be of indeterminate duration, for these States have the option to increase or decrease their use within the limits of their allocations. Logic and equality as between allottees would seem to require that the rentals for each unit of

the plant should be based on amortization of the cost over a 50-year period, so that the respective lessees, and the other allottees for which they are generating agents, might be charged for the use of machinery on the same basis. However, putting all of the provisions of the leases and of the contracts with respect to charges for the use of machinery and equipment on a 50-year basis running from the time the respective units were put in operation, would have meant that as to some units, the amortization period would have extended beyond the leases by periods of one to three years, and as to some units yet to be installed, would have extended the period even further beyond the expiration of the 50-year period. Doubt was entertained by some as to whether, under the existing act, contracts could be made which would contemplate provision for amortization of any part of the cost after the expiration of 50 years from the time when the project was first placed in operation. As a result the contracts were so drawn as to contemplate the completion of amortization with respect to all units by May 31, 1987, notwithstanding the fact that this made a 50-year basis as to some units, a 49-year basis as to others, and a 47-year basis as to others, and an even shorter basis as to units to be installed in the future.

The proposed Adjustment Act contemplates no change whatever with respect to the system of payment of compensation for the use of machinery and equipment, nor of the repayment of the advances therefor, other than that it proposes to clearly authorize and direct the Secretary to place the system of charges for the use of machinery and equipment and of the repayment of the advances on a 50-year amortization basis, computed with respect to each unit from the date when it may be placed in service, and thus remove the discrimination which now exists between those dependent on service from different units.

Authority under Existing Law.

While, as stated, doubt was entertained as to the right of the Secretary to proceed on this basis under the existing Project Act, a strong, and we believe absolutely sound, argument could be made that this procedure is justified by that act. There is nothing in that act which definitely requires that amortization shall be completed within any specified 50-year period. All that was required was that before proceeding with the construction of the dam, the Secretary should make provision by contract for revenues adequate in his judgment to insure the payment of expenses of operation and maintenance and repayment of the reimbursable advances with interest "within 50 years *from the date of the completion of said works*" (emphasis added).

In the first place, there is nothing in this language inconsistent with the idea that such repayments may be made with respect to severable parts of the works, within 50 years from the respective dates of the completion of such severable parts, as is now proposed.

Indeed it may well be said that the Project Act directly authorized that procedure. The authority to the Secretary to make leases was that he "may, in his discretion, enter into contracts of lease of *a unit* or *units* of any Government built plant." It can hardly be questioned that under this language, the Secretary would have had the authority, had he seen fit to do so, to enter into separate leases for each unit constructed, and we do not believe that if he had done so, any one would have questioned that each such lease might have been for 50 years from the date of completion of that particular unit. The limitation on the duration of contracts was that "no contract for electrical energy or for generation of electrical energy shall be of longer duration than 50 years from the date at which *such*

energy is ready for delivery." While this provision appeared in Section 5, relating to contracts for energy, nevertheless Section 6, containing the provisions relating to leases, expressly provided that in case a lease was made "the provisions of Section 5 of this act relating to revenue, *term*, rentals, determination of conflicting applications, and joint use of transmission lines under contracts for the sale of electrical energy, shall apply." (Emphasis added.)

In the second place, if the contrary were true, and it could be said that there must be but one period of 50 years, it may certainly be argued with great force that the "completion of said works" has not occurred until every portion of the works with respect to which reimbursement is to be made has been completed. If so, the Secretary would have been within his authority under the existing act, if in his judgment contracts were adequate to provide for revenues, which would amortize the cost within 50 years from the completion of the last unit, whenever that might occur.

All that the proposed Adjustment Act contemplates in this regard is that clear authorization and direction be given to the Secretary to do something which may have been within his discretion under the present law, and which is just and logical.

IV.

The Retroactive Aspect of the Plan.

The proposed Adjustment Act contemplates that the entire plan should be effective as of June 1, 1937, the date on which the operation of the plant commenced (except as to some operation under interim contracts during construction). This would mean that the basis of charges

against the contractors and also the basis of adjustments as between the Colorado River Dam Fund and the general Treasury would be readjusted as of that date.

The transformation of the Project to an *amortization* basis renders it wholly immaterial to the Federal Government whether the readjustment of rates and of the basis of charges is to be effective as of the present date or retroactively as of the date of the beginning of operation. In either event, the repayment will be complete within 50 years, with interest, subject only to minor shortening or lengthening of that period for reasons explained elsewhere herein. If the payments which have already been made for energy already taken are not to be readjusted, it simply means that a less rate will prevail during the remainder of the term than if they are readjusted. Readjustment as of the beginning of operation does not mean that the Federal Government will have to return cash to the contractors. By express provision of the proposed Adjustment Act it will simply mean that those contractors who have already taken energy will receive credits, and thus in effect will have made prepayments on their next ensuing bills.

On the other hand, while the retroactive feature can not detrimentally affect the Treasury of the United States, it is essential from the standpoint of those contractors whose obligations began on June 1, 1937, in order that there may be no discrimination against them.

Discrimination Between Contractors Eliminated.

It is apparent that unless the plan is made effective from June 1, 1937, an element of inequality inconsistent with the fundamental idea of the new plan is injected. The Cities of Los Angeles, Pasadena, Glendale and Burbank,

have been obligated to take, and have been taking, energy since June 1, 1937. The obligation of The Metropolitan Water District began approximately a year later, while the obligations of the Southern California Edison Company Ltd., and the Nevada-California Electric Corporation and the obligation of The City of Los Angeles as successor to the Los Angeles Gas and Electric Corporation will probably not begin until June, 1940. If the new plan were not made effective as of June 1, 1937, the practical effect would be that those contractors who began taking energy at that time would have made an excessive contribution which would not redound to the benefit of the Government but would have the effect of reducing the future rates for all contractors, and thus the contractors whose obligation began at an early date would be bearing part of the burden which in justice and equity should be borne by those whose contracts begin at a later date. At some of the numerous conferences which have been held, all the power contractors, including those who would be benefited by a contrary provision, expressed the opinion that the proposal that the rates should be retroactive to June 1, 1937, is fair and equitable. In short, so far as rates are concerned, it is a matter between the contractors and not affecting the Government, inasmuch as the Government would receive reimbursement with interest whether the rates are retroactive or not.

So far as making the interest rate on repayments from the Dam Fund to the Treasury retroactive to June 1, 1937, is concerned, substantially the same principles apply. The basic thought of the proposed reduction of interest rate is that while the Government should be made whole it should not receive a financing profit. If it is a sound principle, it would seem to necessarily follow that the Government should give credit for profit it has already received as well as foregoing future profit.

V.

The Provision for Readvances.

The proposed Adjustment Act [Section 11] provides that, within the limits of the amounts which have been repaid to the Treasury from the Colorado River Dam Fund, readvances may be made from the Treasury to that fund, upon the request of the Secretary of the Interior. There are several reasons for this provision. In the first place, the Secretary, proceeding on the basis of the present act, has already made payments into the Treasury of sums which would not have been paid if the proposed Adjustment Act had been in effect, and it is likely that it will be necessary that readvances be made to the fund to provide the amounts which will accrue on the payments to Arizona and Nevada and to the Development Fund on the taking effect of the proposed Adjustment Act. Also the change of rates will mean that receipts will be reduced for a short time.

There is another and possibly still more important reason for this provision for readvances, namely: that while the money provided for replacements will *accrue* in equal annual amounts, it will be *expended* intermittently as replacements are required. Probably no replacements of consequence will be required for a number of years, and meantime, the money provided for replacements must be accumulated. Of course, provision could be made for a separate replacement reserve, but this would involve unnecessary complexity, and the simplest plan is to permit the money as received to be paid over into the Treasury, subject to being readvanced when needed. Such payments into the Treasury will, of course, stop interest on so much of the advances as are repaid thereby, but upon any readvancing of money, the amounts will again begin to draw interest.

There must of necessity be some variation of both receipts and expenditures from year to year. The plan for readvances obviates the necessity for holding idle money over from one year to the next, and meets all the requirements with the utmost of simplicity.

VI.

The Provisions for Supplemental Contracts.

The proposed Adjustment Act provides [Section 13] that, on written demand made by the holder of any "main contract" within 60 days after notice of promulgation of rates, the Secretary shall enter into a supplemental contract with such holder, modifying its existing contract, so as to conform to the basis contemplated by the proposed Adjustment Act (the words "main contract" being so defined as to include those contracts under which the primary disposal of the energy is made, but to exclude those contracts which may be regarded as "incidental" or "casual," such as those for the disposal of energy temporarily available).

This is appropriate and logical in view of the fact that the holders of existing contracts have rights which should not be impaired without their consent.

The proposed act [Section 14] also authorizes the Secretary to enter into supplemental contracts with the holders of other than "main contracts," making such modifications therein as he may deem proper in the light of the provisions of the contracts supplemental to the main contracts. There are several such incidental contracts in existence, and it may be just and equitable for the Secretary to consent to modifications thereof to harmonize such contracts in certain respects with the supplements to the "main contracts."

VII.

Miscellaneous Provisions.

The proposed Adjustment Act contains miscellaneous provisions as follows:

(1) That the execution of a supplemental contract shall be a waiver of the right to the readjustment of rates on the present competitive basis [Section 15];

(2) That any contractor failing or refusing to execute a supplemental contract shall continue to pay rates and charges on the basis of its existing contract, subject to periodic readjustments under the Project Act, as if the Adjustment Act had not been passed [Section 16];

(3) That the Secretary of the Interior shall submit and publish annual reports on the project [Section 17];

(4) That the proposed Adjustment Act shall take full effect, if within 180 days after notice of promulgation of rates, allottees obligated to take all the firm energy have entered into supplemental contracts contemplated by the act, subject to the further provision that if, within said period, such contracts have been executed by allottees obligated to take 90 per centum of such firm energy, the Secretary may in his discretion find that the taking effect of the act is justified and thereupon it shall become effective. However, the provisions are such that those portions of the act which relate to the determination and promulgation of rates and the making of supplemental contracts shall become effective immediately [Section 18].

RESPECTFULLY SUBMITTED APRIL 15, 1939

JOINTLY ON BEHALF OF

THE STATES OF THE COLORADO RIVER BASIN:

ARIZONA
CALIFORNIA
COLORADO
NEVADA
NEW MEXICO
UTAH
WYOMING

THE BOULDER DAM POWER ALLOTTEES:

THE STATE OF NEVADA
THE STATE OF ARIZONA
THE CITY OF LOS ANGELES
THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA
THE CITY OF PASADENA
THE CITY OF GLENDALE
THE CITY OF BURBANK
SOUTHERN CALIFORNIA EDISON COMPANY LTD.
THE NEVADA-CALIFORNIA ELECTRIC CORPORATION