UNITED STATES DEPARTMENT OF THE INTERIOR

THE HOOVER DAM POWER AND WATER CONTRACTS AND RELATED DATA

WITH INTRODUCTORY NOTES

BY

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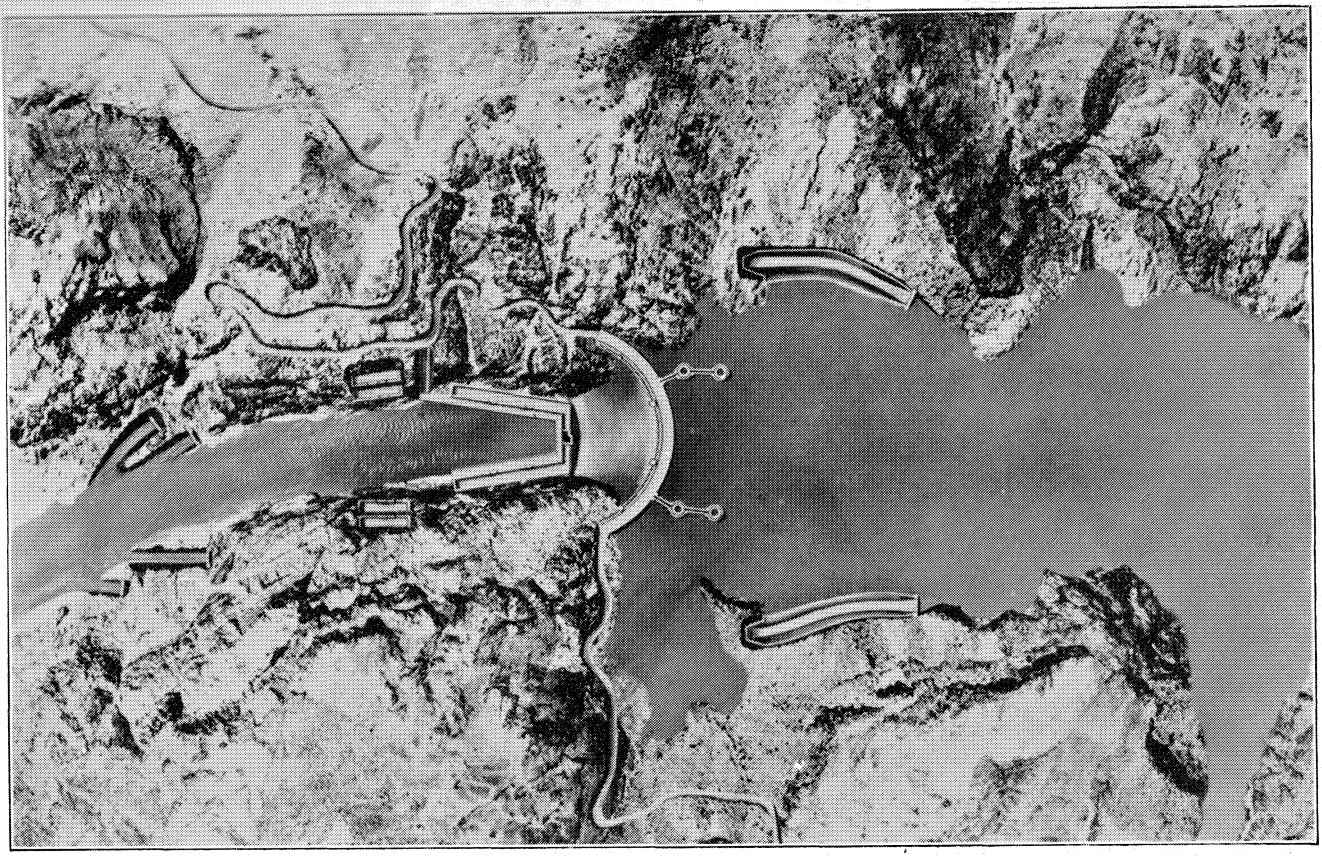
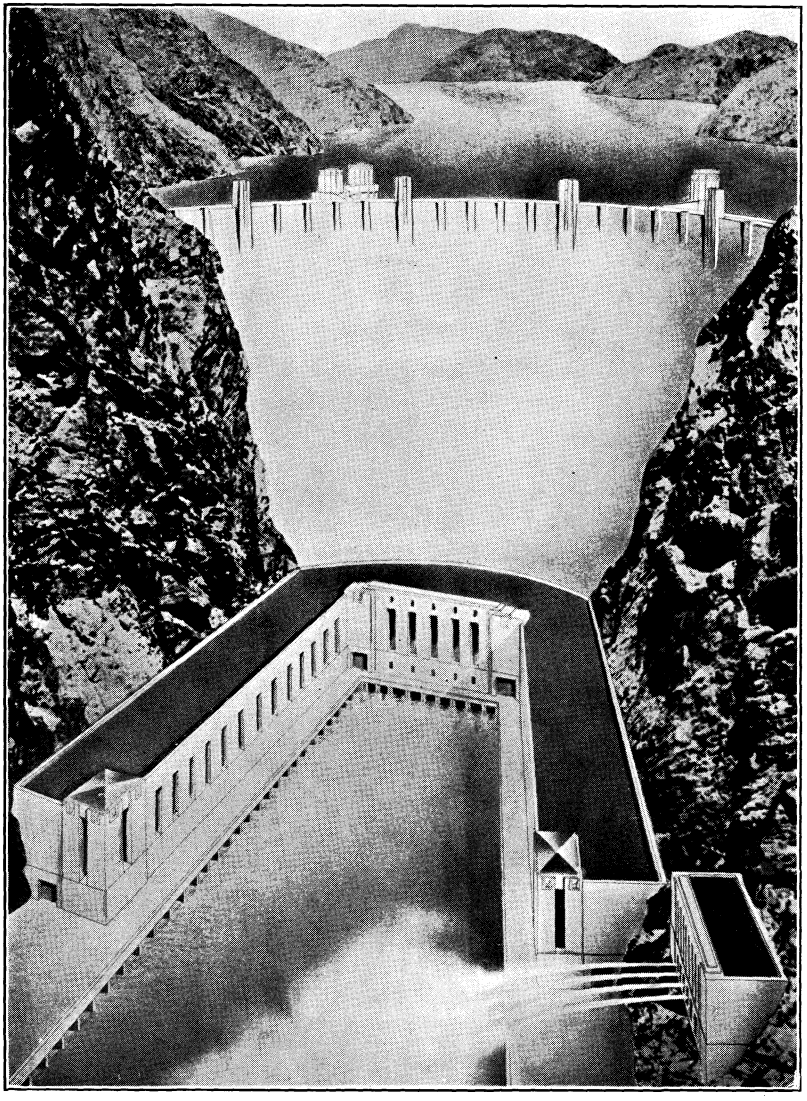


HOOVER DAM AS IT WILL APPEAR FROM THE AIR



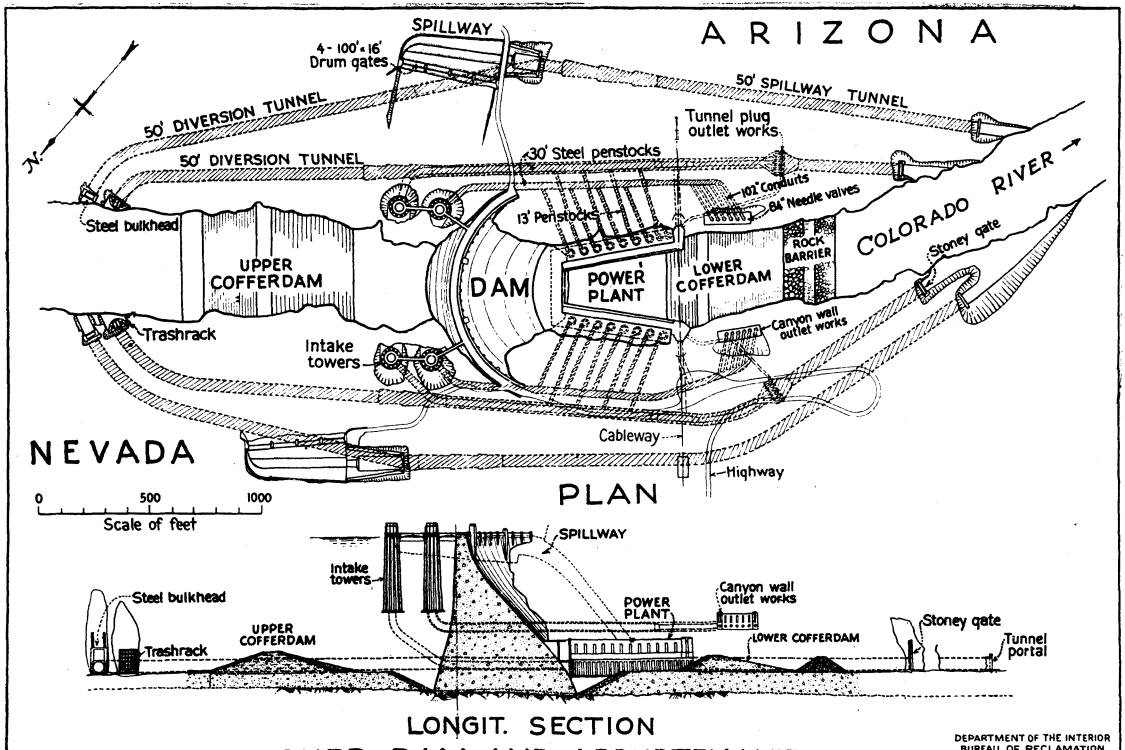
HOOVER DAM AS IT WILL APPEAR ON COMPLETION

INTRODUCTION

On November 24, 1922, Herbert Hoover, representing the United States, affixed his signature to the Colorado River compact. That agreement among the States of the Colorado River Basin made possible Federal assistance in the development of the Lower Basin.

On July 3, 1930, as President, he signed the appropriation bill which initiated the construction of the dam which now bears his name. Between these two dates intervened the enactment of the Swing-Johnson bill, the negotiation of the power contracts whose revenues will amortize the cost of the dam, and water contracts disposing of California's share of the river's water. In this volume are printed the texts of these contracts, together with the legislation and data with which they are related. Included also is material relating to the second half of the Boulder Canyon project, the All-American Canal, and a proposed water settlement with Arizona.

Preceding the texts of these instruments are introductory notes, divided into two parts: (1) The Project and the Department, and (2) An Analysis of the Contracts. The texts of the instruments and accompanying data appear in the appendixes.



HOOVER DAM AND APPURTENANT WORKS

DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION
BOULDER CANYON PROJECT

JAN. 4, 1933 45-D-2398

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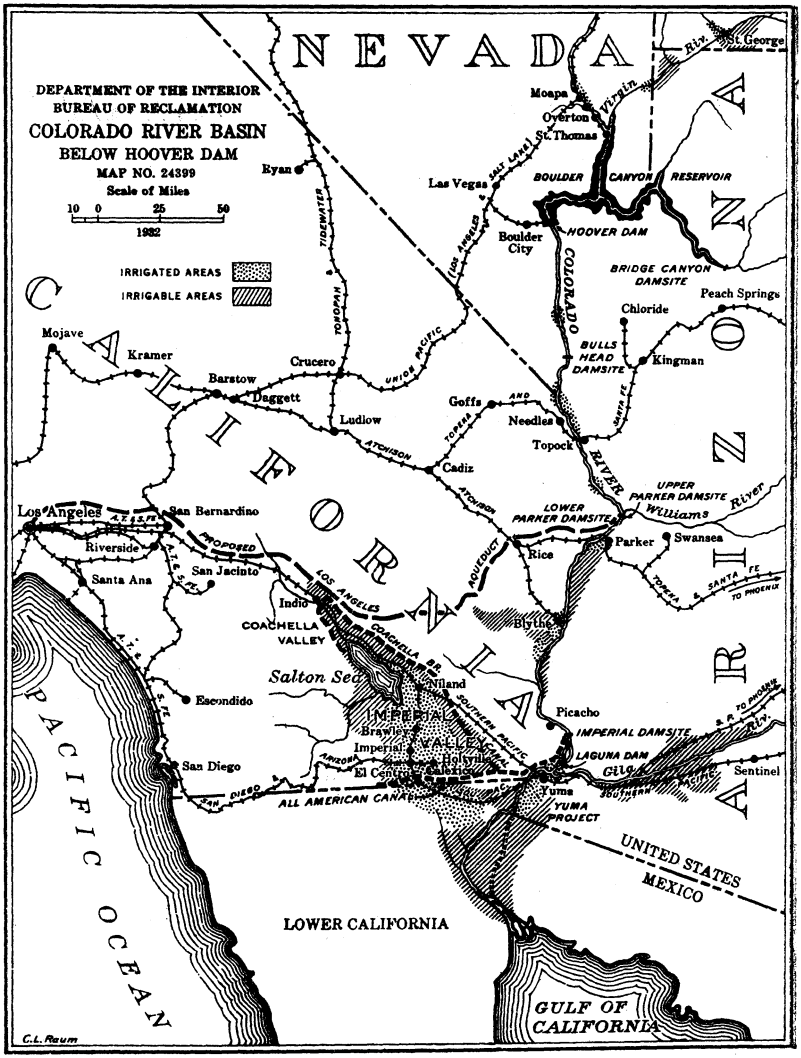
THE PROJECT AND THE DEPARTMENT



The Boulder Canyon Project and Adjacent Territory

THE PROJECT AND THE DEPARTMENT

1. THE COLORADO RIVER SYSTEM

The Colorado River system is roughly comparable to an hourglass. The main stream is 1,293 miles long. Shortly below Lee Ferry, which is about 725 miles above the river's mouth, the stream enters a bottleneck. For nearly 400 miles further it flows through a precipitous canyon country, then leaves it to enter the agricultural areas of the lower basin. Before it emerges it passes through the walls of Black Canyon, some 355 miles below Lee Ferry.

Lee Ferry constitutes the division point between the "upper basin" and the "lower basin." These two basins are separated physically and climatically. The entire river system comprises about 240,000 square miles. This area is about equally divided between the upper division, Colorado, New Mexico, Utah, and Wyoming, and the lower division, Arizona, California, and Nevada.

In litigation it has been assumed that the river and its tributaries carry annually an average of about 18,000,000 acre-feet of water, that about half of this has been put to beneficial consumptive use, and that the balance is flood water for the use of which storage facilities are necessary.

It was probably inevitable that on a river system of this size, flowing through the arid West, the seven States should fall into disagreement over their respective water rights. In 1922, when they undertook to settle these problems, it was estimated that about 2,127,000 acres of irrigable land lay in the lower basin and about 4,000,000 in the upper basin, and that of these areas, the lower basin contained about 1,165,000 acres awaiting development and the upper basin about 2,500,000.

For a number of years prior to 1922 the lower basin, growing more rapidly in population than the upper area, had pressed for development of the lower Colorado River, and the upper area had objected. Two lower-basin projects particularly were urged for action. One was the Imperial Valley, lying below the level of the river, which sought relief from floods through the erection of a flood control dam, and sought an all-American water supply in

lieu of its present canal. This passes through and is largely controlled by Mexico. The second project, presented by interests of the California Coastal Plain, called for the erection of a power dam at Black Canyon or Boulder Canyon. In 1919 a bill had been introduced in Congress for Federal assistance in building the All-American Canal [1] and a similar bill had been introduced in 1920.[2] In April, 1922, a third bill had proposed not only the building of the All-American Canal, but the building of a storage dam upon the main trunk of the river below the mouth of Green River.[2a]

Arizona was formulating projects of her own, particularly those calling for the irrigation of a large area on the Gila River and some territory in the vicinity of Parker.

It was rapidly becoming apparent that the normal flow of the river would not be adequate to supply all the uses demanded by the upper and lower basins; but the proposals for storage in the lower basin, without guaranties to the upper States, were regarded by the latter as holding the threat of establishing priorities which would preclude later use of the water in the upper division.

The crystallization of issues was a slow process. The various States approached the problem individually, and the conception of a division of water as between the two basins, instead of an apportionment among the individual States, was not an immediate development. Within each of the States there were, of course, conflicting claims by various projects. But the common desire for a solution gained headway. In 1920, at a meeting of representatives of governors of western States, Mr. Delph E. Carpenter's novel proposal for use of the treaty-making powers of the States was endorsed.[2b] As a result of the approval by the governors of the Carpenter interstate compact proposal, the legislatures of each of the seven States authorized appointment of commissioners, and the governors designated Governor Thomas E. Campbell, of Arizona, to bring their request for Federal participation to the attention of Congress.[2c] It was followed by authorization of an agreement by

[1] H. R. 4044, 66th Cong., 1st sess.

[2] H. R. 11553, 66th Cong., 2d sess.

[2a] H. R. 11449, 67th Cong., 2d sess.

[2b] Mr. Carpenter's plan was the recommendation of a subcommittee consisting of Mr. Carpenter, of Colorado, and Mr. Sims Ely, representing Gov. Thos. E. Campbell, of Arizona.

[2c] The Governors' proposal for a Federal authorizing act was drafted and presented to Congress by the same subcommittee.

the State legislatures and by Congress, and the appointment of commissioners.

The members of the original Colorado River Commission were—

Arizona: W. S. Norviel.
California: W. F. McClure.
Colorado: Delph E. Carpenter.
Nevada: J. G. Scrugham.
New Mexico: Stephen B. Davis, jr.
Utah: R. E. Caldwell.
Wyoming: Frank C. Emerson.

The commission was presided over, on behalf of the United States, by Herbert Hoover, appointed by the President.

This Colorado River commission held a series of seven executive meetings in Washington between January 26 and 30, 1922; adjourned to Phoenix, Ariz., for its eighth session on March 15; to Denver, Colo., for its ninth session on April 1, and from November 9 to 24 held its final and successful 18 executive sessions at Santa Fe, N. Mex. It had meanwhile held a series of public hearings at Phoenix, Los Angeles, Salt Lake City, Grand Junction, Denver, Cheyenne, and Santa Fe.

2. THE COLORADO RIVER COMPACT

The developments sketched in the preceding pages led to the signing, on November 24, 1922, of the Colorado River compact among the States of Arizona, California, Colorado, Nevada, New Mexico, Utah, and Wyoming.

The compact itself is an instrument of only 8 printed pages, comprising 11 articles.

It defines the Colorado River system to include the Colorado River and all of its tributaries within the United States. It defines the Colorado River basin to include the drainage area of the system and all other territory to which its waters might be beneficially applied, thereby including the Imperial Valley, which lies below sea level.

Adopting Lee Ferry as a point of division, it divides the Colorado River system into an upper basin, comprising the drainage area above Lee Ferry, and a lower basin, comprising the drainage area below that point. Colorado, New Mexico, Utah, and Wyoming thus constituted the "upper division" and California, Arizona, and

Nevada the "lower division," although in fact the two "basins," as distinguished from "divisions," each include small areas of States assigned to the opposite division.

Abandoning the plan of dividing the water among the seven States individually, the compact in Article III (*a*) effected an allocation as between the two basins, leaving to future adjustment the division of water within each basin.

It apportioned 7,500,000 acre-feet to each basin in Article III (*a*); and in Article III (*b*), the lower basin was given the right to increase its beneficial consumptive use by 1,000,000 acre-feet per annum.

Article III (*c*) provided against the contingency of a treaty between the United States and Mexico. This paragraph states that in the event the United States shall recognize in Mexico any right to the use of Colorado River water, this water will be supplied first from surplus over and above the aggregate specified in paragraphs (*a*) and (*b*) (that is, 16,000,000 acre-feet), and that if this is not sufficient, the burden shall be borne equally by the upper basin and the lower basin. The States of the upper division covenanted to deliver at Lee Ferry water to supply one-half of that deficiency.

Article III (*d*) binds the States of the upper division to release during each 10-year period an aggregate of 75,000,000 acre-feet.

Article III (*e*) provides that the States of the upper division will not withhold water and the States of the lower division will not require the delivery of water which can not reasonably be applied to domestic and agricultural use.

Article III (*f*) provides for a further apportionment from time to time after October 1, 1963, of any water unapportioned by paragraphs (*a*), (*b*), and (*c*).

Article IV provides that the use of the river for purpose of navigation shall be subservient to uses for domestic, agricultural, and power purposes.

Article IV (*b*) provides that, subject to the compact, water of the system may be impounded and used for generation of electric power, but that such use shall be subservient to the use of water for domestic and agricultural purposes, calling these "dominant purposes."

Article IV (*c*) provides that the provisions of that article shall not interfere with the regulation by any State within its boundaries of the use of appropriation and distribution of water.

Article V constitutes the Director of the Reclamation Service, the Director of the Geological Survey, and the chief water official of each State as a commission to promote systematic determination of facts as to flow, appropriation, consumption, and use of water; to publish data on annual flow, and to perform other duties assigned by the compacting States from time to time.

Article VI provides for settlement of disputes by the appointment of commissioners as an optional alternative to litigation.

Article VII provides that the compact shall not affect the obligations of the United States to Indian tribes.

Article VIII provides that present perfected rights shall be unimpaired by the compact. It adds that when storage capacity of 5,000,000 acre-feet shall be provided in the lower basin, claims of such rights shall attach to such stored water, and that all other rights to beneficial uses shall be effected solely from water apportioned to the particular basin. The meaning of this article has been the subject of some controversy.

Article IX preserves to each State its right to maintain legal or equitable proceedings necessary to protect its rights under the compact.

Article X provides that the compact may be terminated by unanimous consent, but in that event all rights claimed under it shall continue unimpaired.

Article XI provides that the compact shall become effective upon ratification by the States and by Congress, and provides for exchange of confirmation to that effect.

The compact was in fact ratified by each of the compacting States except Arizona. Controversy between Arizona and the other States gradually crystallized upon issues turning upon the relationship of the Gila River to the apportionment affected by the compact.

Article II (*a*) of the Colorado River Compact defines the Colorado River system so as to include all of its tributaries within the United States, i. e., the Gila River, among others. Arizona objected to the inclusion of the Gila because its waters were already largely appropriated in Arizona and the result of including that river in the allocation reduced the quantity of water available from the main stream for apportionment to the lower basin. Arizona further objected on the ground that whereas the compact eliminated the prior-appropriation doctrine as between the two basins, it left it in force as between California and Arizona, leaving Arizona subject to the danger which

the upper basin had escaped by the compact, i. e., the establishment of priorities on behalf of California by diversions through the proposed All-American Canal.

The compact, having been ratified by six of the seven States, was finally submitted to Congress for approval some five years after its execution, without awaiting Arizona's further action. Bills for this purpose had been introduced in 1925, but had not been pressed. This brings us to consideration of the Boulder Canyon project act.

3. THE BOULDER CANYON PROJECT ACT

Objectives.

The Swing-Johnson bill was approved December 21, 1928. It was the sixth of a series of bills. The first and second [3] had provided only for the construction of a canal connecting the Imperial Valley with the Colorado River. The next four, including the successful bill, were proposals introduced by Senator Hiram Johnson and Representative Phil D. Swing. All of these provided for the construction of a dam at Black Canyon or Boulder Canyon, as well as the building of the All-American Canal.

As finally enacted, the Boulder Canyon project act [4] accomplished three major objectives.

(1) The Colorado River compact was ratified, and provision made that in the event only six States should ratify it, the compact should become effective as a six-State compact, provided California was one of the adhering parties and provided further that California should agree to limit her use of water for the benefit of the other six States.

(2) The construction of a dam at Black Canyon or Boulder Canyon was authorized.

(3) The construction of an All-American Canal connecting the Imperial and Coachella Valleys with the Colorado River was authorized. These works would be about 270 miles below Black Canyon. For the construction of these two works expenditure of a total of $165,000,000 was authorized.

In addition, the act authorized a subordinate compact between Arizona, California, and Nevada for the division of the water appor-

[3] H. R. 6044, 66th Cong., 1st sess.; H. R. 11553, 66th Cong., 2d sess.

[4] H. R. 5773, 70th Cong., 2d sess.; Public No. 642, 70th Cong.; 45 Stat. 1057.

tioned to the lower basin by the Colorado River Compact. This three-State agreement has not been consummated.[5]

The act also authorized the investigation of the proposed Parker-Gila project in Arizona.[6]

The act further authorized future agreements among the seven basin States for a comprehensive plan of development of the river, including the construction of dams, diversion works, power houses, and other structures, and the creation of interstate commissions and corporations and other instrumentalities for these purposes.[7]

The authorization for the dam (subsequently located at Black Canyon) required that the structure be used first, for river navigation and flood control; second, for irrigation and domestic purposes and satisfaction of present perfected rights in pursuance of article 8 of the Colorado River Compact; and third, for power.[8]

The act established a unique method of financing the construction of the dam. A special fund was established, designated as the Colorado River Dam fund.[9] This fund bears somewhat the relation to the Treasury of a subsidiary to a parent corporation. The act authorizes the transfer from the Treasury to this fund of $165,000,000, to be repaid with interest at 4 per cent.[9] Appropriations to this fund from the Federal Treasury for construction of the dam were authorized.[10] Earlier bills had provided for a bond issue; the bill finally enacted looks to current appropriations.

Conditions precedent.

Appropriations from the Treasury into the fund, and expenditures therefrom for construction, were made conditional upon three contingencies:

(1) Section 4–*a* required that no steps be taken toward construction until the seven States had ratified the Colorado River Compact and the President had so declared by public proclamation, or if seven States failed to ratify the contract within six months of the passage of the act, until six of the States, including California, should ratify the agreement.

(2) Section 4–*a* required that the State of California agree with the United States irrevocably and unconditionally, for the benefit of the other six States of the basin, that annual consumptive use of Colorado

[5] Sec. 4–*a*.
[6] Sec. 15.
[7] Sec. 19.
[8] Sec. 6.
[9] Sec. 2.
[10] Sec. 3.

River water in California should not exceed 4,400,000 acre-feet of water apportioned to the lower basin States by Article III(*a*) of the compact, plus one-half of any excess.

(3) The Secretary was required to make provision for revenues by contract adequate in his judgment to insure payment of all expenses of operation and maintenance and the repayment within 50 years of the date of completion of the works of all amounts advanced to the fund, with interest made reimbursable under the act.

Construction of the All-American Canal was subjected to the same three conditions, except that section 4–*b* required that the Secretary make provision for revenue by contract or otherwise adequate to insure payment of expenses of construction, operation, and maintenance of the canal and appurtenant works "in the manner provided by the reclamation law." As the reclamation law does not require the repayment of interest, the two classes of expenditures from the fund are on separate bases as to interest, as well as the source of income. Revenues from operation of the dam are required to repay the cost of the dam, with interest, and contracts made as under the reclamation law (i. e., contracts with water users, districts, or associations) are required to repay the cost of the canal, without interest.

The act made a series of provisions governing the revenues for the two classes of structures.

Provisions governing Boulder Canyon revenue contracts.

Section 5 authorized the execution of two classes of contracts relating to the use of the Boulder Canyon Dam—contracts for electrical energy, and for the storage and delivery of water.

Among other provisions relating to these Boulder Canyon contracts appear the following:

(1) The contracts together must yield revenues which in addition to other revenues under the act (i. e., revenue from the All-American Canal) will in the Secretary's judgment cover all expenses of operation and maintenance and the repayments required by section 4–*b*.[11]

(2) Contracts for water, irrigation, and domestic uses must be for permanent service and conform to section 4–*a*. It is provided that no person shall have the use, for any purpose, of water stored by the dam except by contract made by the Secretary.[11]

[11] Sec. 5.

(3) The Secretary is required to prescribe general and uniform regulations for the award of contracts for the sale and delivery of electrical energy.

(4) No contract for electrical energy may be for a longer period than 50 years from the date on which energy is ready for delivery.[12]

(5) Contracts for electrical energy are required to be made with a view to obtaining reasonable rates and are required to contain provisions whereby at the end of 15 years from the date of their execution and every 10 years thereafter, the contract price will be subject, on the demand of either party, to readjustment either upward or downward, as the Secretary may find to be justified by "competitive conditions at distributing points or competitive centers," and provision for arbitration or court proceedings is made.[12]

(6) The holder of a contract for electrical energy not in default is to be entitled to a renewal "under the then existing laws and regulations" unless his property should be purchased or acquired and the holder be compensated.[13]

(7) Contracts for electrical energy, or for the use of water for generation of electrical energy, are required to be made with responsible applicants who will pay the price fixed by the Secretary with a view to meeting revenue requirements of the act.[14]

(8) In case of conflicting applications, the conflicts are required to be resolved by the Secretary after hearing "with due regard to the public interest" and in conformity with the policy expressed in the Federal water power act as to conflicting applications; except that preference is to be granted first to a State, and that the States of Arizona, California, and Nevada shall be given equal opportunity to avail themselves of their preference within six months of notice by the Secretary. Earlier bills had unqualifiedly required the Secretary "to give preference to applications made by political subdivisions" [15] or had required "preference to applications made by political subdivisions, provided the plans are deemed by the Secretary * * * in the public interest." [16]

(9) The application of a State or political subdivision may not be denied on the ground that necessary bond issue has not been

[12] Sec. 5–*a*.
[13] Sec. 5–*b*.
[14] Sec. 5–*c*.
[15] H. R. 2903, 68th Cong., 1st sess.; H. R. 11499, 67th Cong., 2d sess.
[16] H. R. 6251, 59th Cong., 1st sess.

authorized or marketed, until the applicant has had an opportunity to do so.[17]

(10) Any agency receiving a contract for 100,000 firm horsepower or more may be required to carry 25,000 horsepower for any other contractor upon demand by the Secretary made within 60 days of execution of the principal contract, upon payment of a reasonable share of the cost of construction by the other agency.[18]

(11) The use of public lands for the construction, operation, and maintenance of transmission lines is authorized.[18]

(12) The Secretary is given the option of three methods of contracting for the disposition of power:

(*a*) The United States may build, control, manage, and operate the power plant;

(*b*) The Secretary may lease units of a Government power plant with the right to generate electric energy; or

(*c*) The Secretary may enter into leases for the use of water for the generation of energy, the contractor to provide the equipment.[19]

(13) The Secretary is authorized to prescribe and enforce regulations in accordance with those of the Federal Power Commission, relating to maintenance, control of rates and service in the absence of State regulation or interstate agreement, valuation, transfer of contracts, recapture, expropriation of excess profits, etc.[19]

(14) The United States, in constructing, managing, and operating the dam and other works is required to "observe and be subject to and controlled by" the Colorado River Compact, and is required to insert such provisions in all contracts.[20]

(15) The operation of the dam and other works to be constructed was also made subject to any compact that might be entered into by Arizona, California, and Nevada before January 1, 1929, or any compact among them approved by Congress after that date, provided that in the latter case the compact should be subject to all contracts made by the Secretary prior to the date of such approval.[21] No such compact has been entered into.

Disposition of Boulder Canyon revenues.

Certain provisions were made for disposition of revenues accruing to the Colorado River Dam fund from revenue contracts.

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[17] Sec. 5–*c*.
[18] Sec. 5–*d*.
[19] Sec. 6.
[20] Secs. 8–*a*, 13–*b*, 13–*c*.
[21] Sec. 8–*b*.

The act contemplated two classes of revenues—those required to amortize advances by the Treasury, and surplus revenues.

Sections 2 and 4–*b*, read together, apparently require revenues adequate to meet periodical payments to the Treasury sufficient to amortize with interest within 50 years $140,000,000, less expenditures for the All-American Canal. Twenty-five million of the one hundred and sixty-five million dollars is "allocated to flood control," and apparently its payment may, if necessary, be deferred and paid out of "surplus revenues." See the attorney general's opinion of December 26, 1929, printed as Appendix 47.

Surplus revenues are earmarked for two accounts: 62½ per cent is dedicated to repayment of $25,000,000 allocated to flood control,[22] and 37½ per cent of surplus revenues is allocated to the two States of Arizona and Nevada, one-half to each.[23]

Provisions controlling the All-American Canal contract.

The provisions specifically relating to the All-American Canal lay down seven principal requirements on the Secretary's negotiation of contracts:

(1) Provisions must be made in advance for revenue adequate to insure repayment of construction costs "in the manner provided by the reclamation law," i. e., without interest.[22]

(2) The works authorized to be constructed include a canal connecting the Imperial and Coachella Valleys with the Laguna Dam or other suitable diversion dam in the Colorado River and lying entirely within American territory.[24]

(3) No charge may be made for water or for the use, storage, or delivery of water for irrigation or potable purposes in Imperial and Coachella Valleys.[24]

(4) The Secretary may, in his discretion, after repayment of all moneys advanced, transfer title to the canal and appurtenant structures, except Laguna Dam and the main canal down to Syphon Drop (the point at which the Yuma project diverts water from the main works) to the districts contracting with the United States.[29]

(5) The contracting districts are given the privilege of utilizing any power possibilities on the canal and the net proceeds are required to be paid into the fund and credited to them until their indebtedness shall be paid.[29]

[22] Sec. 2–*b*. [23] Sec. 4–*b*. [24] Sec. 1. [29] Sec. 7.

(6) All lands found by the Secretary to be practicable of irrigation are directed to be withdrawn from entry in accordance with the provisions of the reclamation law, subject to preference in favor of ex-service men.[30]

(7) The 1918 contract between the Imperial Irrigation District and the United States whereby the district undertook to repay part of the cost of Laguna Dam is left unaffected.[31]

The construction of the All-American Canal, like that of the Black Canyon Dam, is made subject to the Colorado River compact.[32]

General provisions of the act, in addition to those outlined, required that claims of the United States should have priority over all others, secured or unsecured.[33] The rights of the States to control the use of water within their borders were preserved.[34] The act was made a supplement to the reclamation law.[35] The commissioners of the States were given the right to act with the Secretary in an advisory capacity,[36] and the Federal Power Commission was directed not to issue or approve any permits or licenses until the act should become effective.[37]

The entire act was made ineffective until the 6-State ratification required by section 4–a, and enactment by California of a statute limiting her use of water should become effective and the President should so proclaim.[38]

The proclamation was issued on June 25, 1929.

4. NEGOTIATIONS AMONG THE STATES FOLLOWING THE PROJECT ACT

California, Nevada, New Mexico, Colorado, Utah, and Wyoming enacted statutes accepting the conversion of the Colorado River compact from a seven-State into a six-State agreement. Arizona did not.

The Boulder Canyon project act held out an invitation to the States of Arizona, California, and Nevada to enter into a compact for division of the water allocated to the lower basin by the Colorado River Compact,[5] and they were further given the opportunity to control the "division of the benefits, including power," but their agreement was to be subject to any contracts made by the Secretary before ratification by Congress.

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[30] Sec. 9.
[31] Sec. 10.
[32] Secs. 8–a, 13–b, 13–c, 13–d.
[33] Sec. 17.
[34] Sec. 18.
[35] Sec. 14.
[36] Sec. 16.
[37] Sec. 6.
[38] Sec. 4–a.

While plans for the construction of the dam went forward the Interior Department made an effort to bring the three States into an accord. Conferences were held in March and June, 1929, under the chairmanship of Col. William J. Donovan, but the States failed to agree. The Secretary proceeded with the revenue contracts in October, 1929, but announced at a hearing on power applications on November 12, 1929, that no final action would be taken until the States had met again in January. They did so, and again failed to agree.[39] Active negotiation of the power contracts began during the latter part of February, 1930, as outlined below.

5. THE POWER CONTRACTS

The negotiation of the power-revenue contracts required by section 4–*b* of the Boulder Canyon project act required three preliminary determinations:

(1) Since these contracts must provide revenue to amortize the cost of the dam, the first undertaking was to verify the estimates of the dam's costs and to set up a definite goal for revenues. The exhaustive studies made under the Commissioner of Reclamation, Dr. Elwood Mead, Chief Engineer R. F. Walter, and their predecessors, Arthur P. Davis and F. E. Weymouth, had been supplemented

[39] The commissioners on behalf of Arizona, California, and Nevada, which undertook the 1929 and 1930 negotiations following enactment of the Boulder Canyon project act, were—

Arizona: C. B. Ward, John Mason Ross, A. H. Favour.
California: John T. Bacon, W. B. Mathews, Earl C. Pound.
Nevada: F. B. Balzar, George W. Malone, E. W. Clark.

In addition, representatives of the four upper basin States participated in an effort to bring the lower basin States together. They were—

Colorado: Delph E. Carpenter.
New Mexico: Francis C. Wilson.
Utah: William R. Wallace, W. D. Beers, William W. Ray.
Wyoming: J. A. Whiting.

Colorado was further represented by L. Ward Bannister, special counsel to the City of Denver, and Robert E. Winbourn, Attorney General of Colorado.

California's delegation was supplemented by W. B. Mathews, Harry L. Heffner, Mark Rose, and Charles L. Childers.

At the request of Secretary Wilbur, the Governors of Arizona, California, and Nevada each appointed an additional special member to assist in the January, 1930, negotiations. The three special representatives were—

Arizona: Senator Carl Hayden.
Nevada: Senator Key Pittman.
California: Hon. William J. Carr.

by the review of the so-called Sibert board.[39a] The latter was a commission of engineers appointed pursuant to an act of Congress, whose principal function was to pass upon safety features of the proposed works. The result of all these studies, as reported by Commissioner Mead, fixed the estimated cost of the Boulder Canyon Dam and power plants at $109,446,000. Interest upon this sum during construction was estimated to amount to $11,554,000, or a total estimated cost of $121,000,000. During the negotiation of the contracts the Sibert board authorized an increase in the height of the dam, to raise the water level 25 feet; and, while that board estimated that the higher dam could be built within the original estimate, the Bureau of Reclamation added for safety another $4,392,000 to the estimate, making an aggregate investment of $125,392,000. But as the project act provided that $25,000,000 of this cost might be allocated to flood control, to be repaid out of surplus revenues, the amount remaining to be met by firm power sales became fixed at $100,392,000. But of this sum, $17,717,000 was estimated to be the cost of power machinery, which it was contemplated would be financed by the lessees of the power plant. This reduced the net investment, exclusive of flood control and the cost of machinery, to $82,675,000. Computed against an amortization period of 50 years, interest at 4 per cent on this investment (required by the project act to be paid to the Treasury) was estimated at $108,107,007. The total which the Secretary was required to recover from sale of power during a 50-year period thus became $206,920,024.

(2) Preliminary studies of the quantity of water available for generation of power had been carried forward under the direction of Mr. E. B. Debler, hydraulic engineer of the Bureau of Reclamation. Revised to January 31, 1930, these computations showed that with a dam 557 feet high, we would have available on completion 3,600,000,000 kilowatt-hours of firm energy per year; with a dam 575 feet high, 4,240,000,000; and with a dam 582 feet high, 4,330,000,000. During the negotiation of the contracts the figure 4,240,000,000 was assumed. During negotiations the decision of the Sibert board, permitting an increase in the water level to 582 feet, raised this output by 90,000,000 kilowatt-hours, and this increment was separately disposed of.

[39a] This preliminary commission, "The Colorado River Board," reviewed the plans and specifications with particular reference to safety items. It consisted of Maj. Gen. Wm. L. Sibert and Messrs. Charles F. Berkey, Warren J. Mead, Daniel W. Mead, and Robert Ridgway.

(3) The third basic element of information required before undertaking negotiations was the price which could be realized for this power. That price was subject to control by two factors:

(*a*) The Secretary was required by the project act to obtain a sufficient rate to amortize the cost of the dam, but (*b*) the act required that the amount be determined by "competitive conditions at distributing points or competitive centers"; and this latter would have been a determining factor even in the absence of statutory direction. As the only market large enough to absorb sufficient energy to yield the required revenues lay in southern California, and was located over large oil and gas deposits, the cost of energy provided by oil and gas necessarily fixed the comparative value of Boulder Canyon power. A study was accordingly undertaken by R. F. Walter, Chief Engineer, L. N. McClellan, chief electrical engineer for the bureau, Prof. W. F. Durand, of Stanford University, and others. Their report, rendered on September 10, 1929, computed the value of Boulder Canyon power at the switchboard on a series of assumptions as to costs of private and public development, all of which reckoned back to a value for the use of falling water, amounting to about 1.63 mills per kilowatt-hour.

The amount of money to be brought in by sale of power at the rate stated would, of course, be subject to certain assumptions. First, the project act required the readjustment of rates to accord with competitive conditions at competitive centers 15 years after the date of the contract, and every 10 years thereafter. Second, the amount of water available for generation of power would decrease by virtue of upstream use and gradual silting of the reservoir. Third, the amount would be affected by the number of years covered by each power contract. (The contracts ultimately negotiated disposed of 4,330,000,000 kilowatt-hours of firm energy on the completion of the dam, decreasing at the rate of 8,760,000 kilowatt-hours per year thereafter; and the three groups of contracts will run for 50, 49, and 47 years, respectively, as described below. They will yield a total from the sale of firm power amounting to $327,866,350, and are so distributed that performance by any two of the three principal contractors will provide the minimum of $207,000,000 required for amortization.)

Invitations for applications for the purchase of power were published on September 10, 1929. October 1 was fixed as the application

date. Upon that date the Secretary had at hand applications from 27 parties. Some of these applications were conditional and others were indefinite; but the three principal applicants were the City of Los Angeles, the Southern California Edison Co., and the Metropolitan Water District of Southern California. Each of the first two asked for the entire power output, which was assumed at that date, prior to decision on the final height of the dam, to be 3,600,000,000 kilowatt-hours. The Metropolitan Water District asked for about half that amount of energy and the State of Nevada asked for a third of it. The total of the applications was thus well over three times the amount of power available.

The Secretary was accordingly faced with the problem of allocating the energy available among the conflicting applicants.

The allocation of the energy was undertaken on the premise that the project act required that the public interest be the governing factor, and that the first requisite in protecting the public interest was to provide adequate security for the taxpayers' money. It was recognized that the absorption of this quantity of power represented a serious problem and that adequate security for the Government required that the risk be spread among several agencies. It was recognized also that it was desirable that as broad a regional benefit be obtained from this power as was consistent with financial soundness. The dam would rest on the border between Arizona and Nevada, and it was desired to give them an opportunity to use its energy; but neither of them was in a position to make a firm contract for use of any power within its borders. The California applicants included agencies serving cities, great rural areas, and the Metropolitan Water District, which proposed to construct an aqueduct from the Colorado River to the Coastal Plain. It was recognized that the water needs of this area were the great motive force behind the financing of the dam.

On October 21 the Secretary announced a tentative allocation of power, as follows:

"The power to be developed at the Boulder Dam subject to certain deductions is to be contracted for as follows:

"To the Metropolitan Water District of Southern California, 50 per cent, or so much thereof as may be needed and used for the pumping of Colorado River water.

"To the City of Los Angeles 25 per cent; and

"To the Southern California Edison and associated companies, 25 per cent.

"These allotments are to be subject to certain deductions which may arise through the exercise of preference rights, i. e.,

"(*a*) not exceeding 18 per cent of the total power developed for the State of Nevada for use in Nevada;

"(*b*) not exceeding 18 per cent of the total power for the State of Arizona, for use in Arizona, as above; and should either of the States not exercise its preference rights the other may absorb them up to 4 per cent;

"(*c*) not exceeding 4 per cent for municipalities which have heretofore filed applications.

"All such preference rights in whole or in part are to be exercised by the execution of valid contracts with the respective States and municipalities satisfactory to the Secretary and the exercise of such preference rights is to reduce proportionately the above allotments to the district, the city, and the company.

"Any State desiring to withdraw power within the limitations above stated must serve on the Secretary of the Interior written notice within not less than 12 months of the amount of power desired, and for the purchase of which valid contracts satisfactory to the Secretary must be executed.

"Power contracted for but not required within a State shall be allocated to the city and the company on a 50-50 basis, with the reservation that it can again be called for within a reasonable time for use within the State. All power provided a State shall be at actual cost.

"Should the 50 per cent allocated to the Metropolitan Water District be not required for pumping, this shall become available to the City of Los Angeles, 66⅔ per cent; to the Southern California Edison and associated companies, 33⅓ per cent.

"Any municipalities desiring power within the limitation prescribed must execute the necessary contract therefor within 12 months from the date the contracts are made with the district and the city.

"Any firm power available at the Boulder Canyon Dam for the payment of which other contractors do not become and remain liable, aside from that allocated to the Metropolitan District, shall be taken and paid for by the City of Los Angeles and the Edison Co. on a 50-50 basis.

"The contract for the available power is to be made with the City of Los Angeles and the Metropolitan Water District, with various subcontracts assuring the above, and providing for a board of control made up of two members nominated by the City of Los Angeles and

the Metropolitan Water District, two by the Southern California Edison and associated companies, and one by the Secretary of the Interior, to act with the City of Los Angeles in the operation of the plant.

"The Federal Government will install the dam, tunnels, power house, and penstocks. The machinery for the generation and distribution of power is to be provided and installed by the lessees. The costs of installation and operation are to be borne by those contracting for the power in proportion to the amounts received. When the dam and power house are actually in operation the lessees may have the right to ask for a review of the actual cost of units of power and be entitled to deductions which will still permit the charge made to return to the Government all advances and interest in accordance with the Boulder Dam act, and provided further that if such review indicates that a higher rate should be paid for power to meet the obligation to the Federal Government such an advance in rate will be put into effect.

"There will be a clause inserted in all of the contracts which will insure the distribution of all power developed at the Boulder Dam at such a price as in the opinion of the Federal Power Commission is fair to all consumers. Should certain municipalities operating their own power plants desire to make separate agreements with the City of Los Angeles and the Metropolitan Water District they shall be supplied with power at cost price.

"The charge for storing water for the Metropolitan Water District will be 25 cents per acre-foot."

November 12, 1929, was set as a date for a hearing in the event of any protests against this allocation as provided in the Boulder Canyon project act. On that date an extensive hearing was held. An attempt was made thereafter to reconcile the conflicting applications on their points of disagreement; it was recognized that the size of the undertaking required that the various contractors present a unified front for the protection of the financial stability of the project.

Negotiations among the conflicting applicants having failed to crystallize in an agreement, Northcutt Ely, assistant to the Secretary, was sent to Los Angeles in the latter part of February, 1930, and negotiations with the applicants were resumed there. On March 20, after negotiations participated in on behalf of the United States by Mr. Ely and Mr. L. N. McClellan; for the City of Los Angeles by Mr. E. F. Scattergood, Dr. John R. Haynes, and members of the

Board of Water and Power Commissioners,[40] for the Metropolitan Water District by Mr. W. B. Mathews, Mr. F. E. Weymouth, Mr. C. C. Elder, Mr. Barry Dibble, and all the directors of the district;[41] and for the Southern California Edison Co. by Mr. R. J. Ballard, Mr. W. C. Mullendore, Mr. Roy V. Reppy, and Mr. F. G. Trowbridge, the following preliminary agreement was reached, on the motion of Mr. John G. Bullock, director of the District:

"*Resolved*, that we recommend to the Secretary of the Interior that the 64 per cent of total firm power from the Boulder Canyon project available to California interests under his allocation be divided, upon terms hereinafter set forth, as follows:

	Per cent of total firm power
To the Metropolitan Water District	36
To the City of Los Angeles and other municipalities which have filed application	19
To the Southern California Edison Co	9
Total (exclusive of unused firm power)	64

and

"*Further resolved*, that we recommend to the Secretary that the Metropolitan Water District be given the first call upon all unused firm power and all unused secondary power up to their total requirements for pumping into and in the aqueduct, and that any unused power of the municipalities be allocated to the City of Los Angeles, and that any remaining unused firm power or unused secondary power be divided one half to the City of Los Angeles and one half to the Southern California Edison Co.; and,

"*Further resolved*, that all parties hereto agree to cooperate to the fullest extent to make the Boulder Canyon project a success in all its phases; and,

"*Further resolved*, that this agreement is based upon the resolution already passed by the Metropolitan Water District of Southern California and accepted by the board of water and power commissioners

[40] The members of the Board of Water and Power Commissioners of Los Angeles for 1930 were Dr. John R. Haynes, president; P. D. Schofield, Frank H. Brooks, and A. B. Prior. H. A. Van Norman was general manager and chief engineer. The city was represented in negotiations by E. F. Scattergood, chief electrical engineer, assisted by W. Turney Fox, special counsel, Attorney F. M. Rottorff, Engineer Panter. The contracts were reviewed for the city by Erwin P. Werner, city attorney, and his staff.

[41] The membership of the board of directors of the Metropolitan Water District of Southern California in 1930 consisted of: Anaheim, O. E. Steward; Beverly Hills, Paul E. Schwab; Burbank, Harvey E. Bruce; Colton, Charles A. Hutchinson; Glendale, W. Turney Fox; Los Angeles, John G. Bullock, W. L. Honnold, John R. Richards, W. P. Whitsett, O. T. Johnson, jr.; Pasadena, Franklin Thomas; San Bernardino, R. C. Harbison; San Marino, Harry L. Heffner; Santa Ana, S. H. Finley; Santa Monica, George H. Hutton.

of the City of Los Angeles whereby that district requests the City of Los Angeles at cost to generate its power requirements and to operate its transmission lines, which lines are to be paid for and owned by the Metropolitan Water District.

"The above resolution was approved March 20, 1930, by representatives of—

"The Metropolitan Water District of Southern California;

"The board of water and power commissioners of the City of Los Angeles;

"The Southern California Edison Co.

This allocation may be compared with the original proposal of the Secretary as follows:

While the allocation of October 21 was stated in terms of maximum use, subject to deductions in favor of the States, the agreement of March 20 was expressed in terms of minimum use, with provisions for use of additional power in event that the States should not require the energy. The final result accords closely with that originally proposed by the Secretary. Thus, depending on the quantities used by the States of Arizona and Nevada:

The City of Los Angeles under the original allocation would have received a minimum of 15 per cent and a maximum of 25 per cent. Under the agreed allocation the city will receive a minimum of 15 per cent and a maximum of about 33 per cent (the municipalities having finally contracted for only about 4 per cent of the 6 per cent allocated to them and the city having absorbed the balance).

The Edison and associated companies would originally have received a minimum of 15 per cent and a maximum of 25 per cent. Under the agreed allocation these companies take a minimum of 9 per cent and a maximum of 27 per cent.

The smaller municipalities would have originally received 4 per cent; as finally contracted for they received that amount plus a decimal fraction.

The Metropolitan Water District would have taken a minimum of 30 per cent and a maximum of 50 per cent. Under the agreed allocation the district will take a minimum of 36 per cent, plus an option on all unused State energy and all secondary energy.

Arizona and Nevada would each originally have received 18 per cent, and each received that proportion in the final allocation.

Following the allocation agreement of March 20, 1930, the negotiation of the contracts was immediately undertaken for the Department

in Los Angeles, under the supervision of Secretary Wilbur and Commissioner Mead, by Messrs. Ely, McClellan, Richard J. Coffey, and Louis C. Hill. While this work was going forward an agreement was secured in Los Angeles on April 27, 1930, among the 11 smaller municipalities that had been allocated an option on 6 per cent of the firm energy.[41a] They agreed to divide the allocation in proportion to their consumption of energy in 1929. Ultimately, however, only Burbank,[41b] Pasadena,[41c] and Glendale[41d] elected to contract. The balance of the municipalities' allocation, as stated above, was absorbed by Los Angeles.

The contracts with the City of Los Angeles, the Southern California Edison Co., and the Metropolitan Water District were finally closed on April 26, 1930, by Dr. John R. Haynes for the city, W. P. Whitsett for the district, John B. Miller for the company, and Northcutt Ely for the Department. General regulations, embodying the principal features agreed on, were promulgated April 24. Under these

[41a] In attendance were the following representatives:
H. H. Coffman, supervisor, Burbank.
J. H. McCambridge, superintendent public service, Burbank.
A. H. Lowe, city engineer, San Bernardino.
M. W. Edwards, director eletrical engineering, Pasadena.
Paul E. Schwab, mayor, Beverly Hills.
Arthur Taylor, construction engineer, Beverly Hills.
J. W. Price, city manager, Anaheim.
Grover L. Walters, superintendent water and lighting, Fullerton.
L. E. Miller, mayor, Santa Ana.
C. A. Hutchinson, city engineer, Colton.
J. W. Charleville, city manager, Glendale.
C. E. Kinlin, mayor, Glendale.
P. Diederich, superintendent light and water, Glendale.
R. L. Boulden, superintendent electrical department, Riverside.
Joseph S. Long, mayor, Riverside.
B. F. DeLanty, general manager, light and power department, Pasadena.
John L. Bacon, chairman, Colorado River Commission, San Diego.
E. F. Scattergood, chief electrical engineer, Los Angeles.
W. C. Mullendore, vice president, Southern California Edison Co.
W. B. Mathews, attorney, Los Angeles.
S. H. Finley, director, Metropolitan Water District, Santa Ana.

[41b] Burbank was represented by H. H. Coffman, supervisor; J. H. McCambridge, superintendent of public service, and James H. Mitchell, city attorney. The contract was signed by J. L. Norwood, president of the council.

[41c] Pasadena was represented by B. F. DeLanty, general manager, Light and Power Department, who also acted as chairman of the allocation committee for the municipalities, and by Harold P. Huls, city attorney.

[41d] Glendale was represented by J. W. Charleville, city manager, C. E. Kinlin, mayor, and P. Diederich, and later by Mayor Frank G. Taggart and City Attorney Bernard Brennan.

contracts 100 per cent of the firm energy was firmly contracted for by these three agencies, subject however to certain privileges in favor of the municipalities and the States. Thus, the city agreed to take and pay for 37 per cent of the firm energy, but undertook to yield 18 per cent for use by the States at any time within 50 years and to yield 6 per cent to the municipalities if they should contract before specified dates. The Edison Co. undertook a firm commitment for 27 per cent, but undertook to yield 18 per cent to the States at any time within 50 years and to yield energy to three associated companies as the four companies might agree. Thus provision was made for the future needs of Nevada and Arizona under a "drawback" arrangement which enables 100 per cent of the firm power to be sold immediately. The Metropolitan Water District undertook to take and pay for 36 per cent.

Ultimately (on November 12, 1931) the Los Angeles Gas & Electric Corporation [41e] and the Southern Sierras Power Co.[41f] contracted.

The municipalities, on the one hand, and the utilities on the other hand, divided their respective allocations on somewhat different bases as to secondary energy and unused State energy.

The ultimate disposition of Hoover Dam power by virtue of these contracts is shown on Table 1.

The contracts with Los Angeles, the Southern California Edison Co., and the Metropolitan Water District, carrying about $327,000,000 in revenues, represented probably the largest power transaction to date. Completed on April 26, 1930, they were brought to Washington by air and submitted to Congress immediately in support of the first appropriation; Congress was nearing adjournment.

[41e] The Los Angeles Gas & Electric Corporation was represented by Addison B. Day, president, and Paul Overton, general counsel.

[41f] The Southern Sierras Power Co. was represented by A. B. West, president, and General Counsel Coil.

TABLE 1. *Ultimate disposition of Hoover Dam energy*

	Firm energy			Secondary energy
	Minimum which United States must supply	Contractor's obligations if energy is available	Maximum which contractor can demand under various conditions	
	Per cent	*Per cent*	*Per cent*	
Arizona [1]	18		22	None.
Nevada [1]	18		22 (18 per cent plus 4 per cent if not used by other State).	None.
Metropolitan Water District.	36	36	72 per cent (its own minimum plus first call on unused State energy).	First call on all secondary energy.
Los Angeles	14.9054 (13 per cent plus uncontracted municipality energy).	32.9054 (its minimum, plus ½ unused State energy, subject to Metropolitan's first call).	32.9054	Call on ½ secondary energy subject to Metropolitan's first call.
Pasadena	1.6183	1.6183	1.6183	None.
Glendale	1.8867	1.8867	1.8867	None.
Burbank	0.5896	0.5896	0.5896	None.
Southern California Edison Co.	7.2	21.6 (7.2 per cent plus 80 per cent of ½ unused State energy).	21.6	Call on 80 per cent of ½ of secondary energy, subject to Metropolitan's first call.
Los Angeles Gas & Electric Corpn.	0.9	2.7 (0.9 per cent plus 10 per cent of ½ unused State energy).	2.7	Call on 10 per cent of ½ of secondary energy, subject to Metropolitan's first call.
Southern Sierras Power Co.	0.9	2.7 (0.9 per cent plus 10 per cent of ½ unused State energy).	2.7	Call on 10 per cent of ½ of secondary energy, subject to Metropolitan's first call.
Total	100	100		

[1] To be contracted for as needed.

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6. THE FIRST APPROPRIATION

The second deficiency bill for 1930 (71st Cong., 2d sess.) carried the first appropriation for the construction of Hoover Dam, in the amount of $10,660,000. In support of the estimate the Secretary reported compliance with the five conditions precedent established by the Boulder Canyon project act and other legislation:

(1) The ratification of the six-State Colorado River Compact as required by section 4–A of the project act.

(2) Proclamation by the President of such ratification, including that by the State of California.

(3) An agreement by California limiting her use of water from the main stream of the Colorado River.

(4) The execution of contracts making provision for revenue adequate in the Secretary's judgment to assure payment of all expenses of operation, maintenance, and construction of the dam and appurtenant works, together with reimbursable interest.

(5) Approval of the plans by a board of engineers appointed pursuant to the statute of May 29, 1928 (45 Stat. 1011), (the Sibert board).

The presentation was made by Secretary Wilbur personally, assisted by members of the Department's staff.

The State of Arizona appeared in opposition to the appropriation, although the contracts reserved 18 per cent of firm energy for that State to be taken by it any time within 50 years, and also provided surplus revenues which were estimated to yield that State under provisions of the project act between 22 and 31 million dollars during the life of the contracts. At the hearings the opposition centered upon the contracting capacity of Los Angeles and phraseology of certain clauses of the contracts. While testimony was presented on behalf not only of the Department but of each of the contractors refuting the Arizona position, it was decided, in view of the brief time remaining before adjournment of Congress, and the possibility of a filibuster, to eliminate the Arizona objections by amendment of the contracts. The amendments were signed on May 28 and 31, 1930, and effected no change in the tenor of the instruments. The contracts were thereupon submitted to the Attorney General for opinion. He reported that "all the requirements of section 4 (*b*) of the Boulder

Dam project act which are made conditions precedent to the appropriation of money, the making of contracts, and the commencement of work for the construction of a dam and power plant in Boulder Canyon have been fully met and performed by the Secretary of the Interior in securing the contracts referred to in his letter." As the city and company contracts were found adequate, the objections made to the Metropolitan contract, principally the lack of funds to build an aqueduct, were not passed upon, but: "Even if the aqueduct financing were construed as being a prerequisite, the Secretary's reservation of energy for the district is within his authority under the second paragraph of section 5 (*c*) of the act."

Later the State of Arizona filed its objections with the Comptroller General, and he concurred with the Attorney General. Both of these decisions appear in this volume, together with an earlier opinion of the Attorney General on interest provisions and the flood-control allocation in the project act. Subsequently the State unsuccessfully sought an injunction in the Supreme Court. The case is outlined on a later page.

7. CONSTRUCTION

The scope of this volume is restricted to the revenue contracts; the construction contracts have been published individually. The plans and specifications for Hoover Dam and appurtenant works were prepared under the supervision of Commissioner Elwood Mead, Chief Engineer R. F. Walter, Assistant Chief Engineer S. O. Harper, and Chief Designing Engineer J. L. Savage, with whom Hydraulic Engineer E. B. Debler, Chief Electrical Engineer L. N. McClellan and Mechanical Engineer D. M. Day have been associated.[42] Legal features of the construction contracts have been prepared under the direction of Chief Counsel Porter W. Dent, by District Counsel J. R. Alexander, Armand Offutt, and R. J. Coffey. The following steps complete the sequence of events preceding actual construction:

[42] A group of engineers appointed by the Secretary and Commissioner and known as the "Hoover Dam Consulting Board," consisting of Messrs. L. C. Hill, D. C. Henny, Wm. F. Durand, and F. L. Ransome, has cooperated with the Commissioner and his staff. A. J. Wiley was a member until his death.

A group known as the "Concrete Board," specialists in cement and concrete, has also been appointed. It consists of Messrs. William K. Hatt, Raymond E. Davis, Franklin R. McMillan, Herbert J. Gilkey, and P. H. Bates.

On July 3, 1930, President Hoover signed the deficiency act, carrying an appropriation of $10,660,000 for initiating construction and automatically placing the power contracts in operation. Seven and a half years before, as the Federal commissioner, he had signed the Colorado River Compact, which cleared away the major obstacles to this project.

On July 7, 1930, Order No. 436 was signed by the Secretary, directed to Commissioner Elwood Mead: "You are directed to commence construction on Boulder Dam to-day." Walker R. Young, construction engineer in charge for the Bureau of Reclamation, put his men in action the same day.[43]

On September 17, 1930, the first blow on the initial construction job—the driving of a silver spike in the first tie of the Union Pacific branch railroad—was struck by Secretary Wilbur, and the Secretary advised the Commissioner: "This is to notify you that the dam which is to be built in the Colorado River at Black Canyon is to be called The Hoover Dam."

On May 6, 1931, the United States assumed exclusive jurisdiction over an area necessary for construction activities in Nevada, in accordance with statutes of that State, and proceeded to build a modern town for the workers, complete with water supply, streets, sidewalks, municipal buildings, and police and fire protection.

As of February 1, 1933, construction of the dam was approximately 15 months ahead of schedule. Four diversion tunnels had been completed; the coffer dams were in place and the river had been successfully diverted. Excavation is now under way and it is expected that the pouring of concrete will commence in the summer of 1933, and that the dam will be completed in 1936. Six Companies (Inc.), is the contractor for construction of the dam, and Mr. Frank T. Crowe is the contractor's superintendent. A summary of operations to date appears in the margin.[44]

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[43] The Government personnel at Boulder City is headed by Walker R. Young, construction engineer. His immediate staff comprises Ralph Lowry, assistant construction engineer; John C. Page, office manager; and Sims Ely, Boulder City manager.

[44] CONTRACTS—AWARDED AND PROPOSED—BOULDER CANYON PROJECT.—The following is a summary prepared by the Bureau of Reclamation:

Under an appropriation of $10,660,000 made available July 3, 1930, for the first year's operations, Boulder Canyon project, Arizona-California-Nevada, the

8. THE CALIFORNIA WATER CONTRACTS

The Act.

The Boulder Canyon project act makes three principal provisions with respect to the use of the waters to be stored by Hoover Dam, in addition to the authorization for building the All-American Canal.

(1) The three States of Arizona, California, and Nevada are authorized to enter into a compact with each other for the allocation

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following work was carried on: Railroad for construction purposes from near Las Vegas, Nev., to dam site; highway from Boulder City to dam site; buildings, streets, water and sewer systems for Boulder City; purchase of power for construction purposes; starting work on the Hoover Dam, power plant, and appurtenant works, including the four diversion tunnels. For the fiscal year 1931–32, a further appropriation of $15,000,000 was made, and for the fiscal year 1932–33, an appropriation of $23,000,000 is available. The principal work during the past year has been the construction of four 50-foot diameter diversion tunnels and the building of Boulder City.

The work on the project is being done by contract rather than by Government forces.

The Los Angeles & Salt Lake Railroad Co. (Union Pacific System), of Los Angeles, Calif., built a 22.7-mile section of railroad from its main line, a few miles below Las Vegas, Nev., to Boulder City, and this branch road is in operation.

The Southern Sierras Power Co., of Riverside, Calif., has the contract for furnishing power for construction purposes. A transmission line was constructed for a distance of 235 miles from Victorville, Calif., to the dam site. The company also built a substation near the dam site. Power was available on the project June 25, 1931. Both transmission line and substation are operated and maintained by the power company.

Bids were opened on January 7, 1931, at Las Vegas, Nev., for building a highway about 7 miles long from Boulder City to the site of Hoover Dam. The General Construction Co., of Seattle, Wash., was awarded the contract, and sublet the work to R. G. LeTourneau (Inc.), of Stockton, Calif. This job was completed in June, 1931.

On January 12, 1931, bids were opened at Las Vegas, Nev., for constructing 10¼ miles (including branches) of the Government construction railroad from the end of the Los Angeles and Salt Lake sections at Boulder City to the dam site. The Lewis Construction Co., of Los Angeles, Calif., was awarded the contract. The railroad was completed in September, 1931. This Government section of railroad is being operated during the construction period by the contractor for the dam.

Bids were opened on March 4, 1931, at Denver, Colo., for construction of the Hoover Dam, power plant, and appurtenant works. The low bid of $48,890,995 was submitted by the Six Companies (Inc.), 510 Financial Center Building, San Francisco, Calif., made up of the Utah Construction Co., of Ogden, Utah; Henry J. Kaiser and W. A. Bechtel Co., of Oakland, Calif., and 206 Sansome Street, San Francisco, Calif., respectively; MacDonald & Kahn (Ltd.) of Los Angeles, Calif.; Morrison-Knudson Co., of Boise, Idaho; J. F. Shea Co., of Portland, Oreg.; and Pacific Bridge Co., of Portland, Oreg. On March 11, 1931, the Secretary of the Interior awarded the contract to the Six Companies (Inc.). These contractors have a field office at Boulder City, Nev., with F. T. Crowe as

of water available to the lower basin under the Colorado River compact. No such agreement has been made.

(2) The project act also authorizes, in section 19, future compacts among the seven basin States relating to the development and use of the Colorado River. No agreement has been entered into under that section.

(3) The Secretary of the Interior is authorized by section 5 to make contracts for the delivery of waters stored by the dam, and it is provided that no person may acquire a right to the use of such waters except by such a contract.

Negotiations of 1930: The Metropolitan Water District.

Two major applications for water contracts were brought forward at an early stage. The Metropolitan Water District of Southern California and the Imperial Irrigation District each presented applications. The first proposed to build an aqueduct from the Colorado River to

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general superintendent. This is the most important job on the Boulder Canyon project, and includes the 730-foot dam, the four 50-foot diameter diversion tunnels, cofferdams, spillways, outlet works, and the power plant (but not including installation of machinery). The construction period will be about 6 years. The contractor is now over 15 months ahead of schedule.

A contract for Boulder City work including street, alley, parking area, and sidewalk grading; street paving; street and parking area surfacing; curbs and gutters; sidewalks; sanitary sewers; and water distribution system was completed by the New Mexico Construction Co., of Alburqueque, N. Mex., in April, 1932. Construction of cottages for Government employees, varying in size from 3 to 7 rooms, and administration building, dormitory and guest house, post-office building and community garages has been completed. A 10-room school building was completed and ready for occupancy in September, 1932. I. M. Bay, of Junction, Utah, was the contractor.

The Consolidated Steel Corporation, of Los Angeles, Calif., is furnishing 50 by 50 foot bulkhead and 50 by 35 foot Stoney gates, and the Hardie-Tynes Manufacturing Co., of Birmingham, Ala., and the Reading Iron Works, of Reading, Pa., are supplying gate hoists. The Babcock & Wilcox Co., of New York City, has the contract for furnishing, erecting, and painting 4 plate-steel headers, varying from 30 to 25 feet in diameter, including 13-foot diameter penstocks, for $10,908,000. The time allowed for completion of this contract is 1,975 days, and the weight of the pipe materials is about 110,000,000 pounds. A fabricating plant is being built by the contractor at Bechtel, about 1 mile from the dam site.

Bids will be opened on March 3, 1933, for furnishing the initial group of turbines, butterfly valves, and governors for the power plant. The first installation comprises five 115,000-horsepower and two 55,000-horsepower, vertical hydraulic turbines. The 115,000-horsepower wheels will be the largest in the world exceeding in size a recent installation on the Dnieper River in Russia. The power plant is laid out for an ultimate installation of fifteen 50-cycle main generating units of 82,500 kv-a. capacity each, and two 60-cylce main generating units of 40,000 kv-a. capacity each. The bureau is now advertising for bids on furnishing 8 welded plate-steel cylinder gates, 32 feet in diameter and 10

the Coastal Plain.[45] A water contract was necessary to enable the district to utilize the electric energy allocated to it.

Accordingly, a water delivery contract was executed with the Metropolitan Water District on April 24, 1930, immediately preceding the execution of its power contract. This water agreement had been preceded by a compromise among the various California claimants to Colorado River water on February 21, 1930, whereby the Metropolitan Water District had been allocated a total of 1,100,000 acre-feet. The amount fixed in the Federal contract was 1,050,000 acre-feet, to provide a margin against further demands from the California Coastal Plain on behalf of cities not members of the Metropolitan Water District.

The Metropolitan water contract was subsequently amended to accord with a further agreement among the California claimants as pointed out below.

Negotiations between the department and the Imperial Irrigation District upon the All-American Canal contract meanwhile proceeded,[46]

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feet high, for installation in the intake towers, and will ask for bids on furnishing generators for the power plant early in 1933.

In January, 1932, a contract for furnishing 380,000 barrels of cement was awarded to the Riverside Cement Co., California Portland Cement Co., Southwestern Portland Cement Co., and Monolith Portland Cement Co., all of Southern California, the four companies acting jointly. This was the first purchase of cement for the dam, power plant, and appurtenant works, which will require about 5,500,000 barrels. A second purchase of 400,000 barrels was made in September, 1932, of which amount the four California companies furnished 332,500 barrels and the Union Portland Cement Co., of Denver, Colo., 67,500 barrels.

Materials entering into the permanent works, such as cement, lumber (not including lumber for forms), reinforcing steel, pipe, gates and valves, structural steel, machinery, etc., are being purchased by the Government after appropriate advertising and competitive bidding. All major purchases are made through the Chief Engineer's Office, United States Customhouse, Denver, Colo., where the main purchasing office of the Bureau of Reclamation is located. Equipment, materials, and supplies required in the construction plant and camp and in the incidental operations of the contractors are purchased by the contractors.

Contract for 150-ton permanent cableway was awarded in October, 1932, to the Lidgerwood Manufacturing Company of Elizabeth, N. J.

[45] The proposal to build an aqueduct to the Colorado River for augmenting the water supply of the Coastal Plain was first brought forward by Chief Engineer William Mulholland, of the Los Angeles Department of Water and Power, and much of the early work was done under the supervision of Mr. Mulholland his associates, H. A. Van Norman, E. F. Scattergood, and W. B. Mathews.

[46] The present plans for the All-American Canal are based upon the surveys and report of Homer J. Gault, Engineer of the Bureau of Reclamation.

and during such negotiations the necessity for a more definite division of the California water became manifest.

The agreement of February 21, 1930, among the Metropolitan Water District, the Imperial Irrigation District, the Coachella Valley County Water District, and the Palo Verde Irrigation District had made no division individually among these agencies but had allocated the water available to California by "agricultural" and "coastal plain" groups, paralleling in this respect the Colorado River compact.

The allocation gave the first 3,850,000 acre-feet of water to the "agricultural group;" next, 550,000 acre-feet to the Metropolitan Water District; third, 550,000 acre-feet to the Metropolitan Water District; and, finally "all water in river available for California use in excess of above 4,950,000 acre-feet per annum" to the agricultural group.

In negotiating the All-American Canal contract it became apparent that, inasmuch as the Palo Verde Irrigation District would not be a party to that contract, a subdivision within the agricultural group would be necessary; meanwhile the City of San Diego had presented an application for a water contract.

The Seven-Party Water Agreement of 1931.

Accordingly, on November 5, 1930, the Secretary addressed the Imperial Irrigation District, and all other agencies who might contract with the United States, requesting that they ask the cooperation of the State of California in effecting an allocation which they could join in recommending to the Secretary of the Interior. From November 5, 1930, until August 18, 1931, a series of conferences was held under the chairmanship of Mr. Ed. C. Hyatt, State engineer of California. By August of 1930 the differences between the parties had been reduced to points touching on the terms of their proposed water contracts with the United States, and representatives of the Interior Department were asked to participate. Messrs. Northcutt Ely, E. B. Debler, and Richard J. Coffey attended for the United States. On August 18, 1931, an agreement was reached, and was subsequently recommended to the Secretary by Mr. Hyatt, State en-

gineer, with the approval of the State division of water resources.[47] Its principal provisions follow:

"The waters of the Colorado River available for use within the State of California under the Colorado River compact and the Boulder Canyon project act shall be apportioned to the respective interests below named and in amounts and with priorities therein named and set forth, as follows:

"SECTION 1. A first priority to Palo Verde Irrigation District for beneficial use exclusively upon lands in said district as it now exists and upon lands between said district and the Colorado River, aggregating (within and without said district) a gross area of 104,500 acres, such waters as may be required by said lands.

"SEC. 2. A second priority to Yuma project of the United States Bureau of Reclamation for beneficial use upon not exceeding a gross area of 25,000 acres of land located in said project in California such waters as may be required by said lands.

"SEC. 3. A third priority (*a*) to Imperial Irrigation District and other lands under or that will be served from the All-American Canal in Imperial and Coachella Valleys, and (*b*) to Palo Verde Irrigation District for use exclusively on 16,000 acres in that area known as the Lower Palo Verde Mesa, adjacent to Palo Verde Irrigation District, for beneficial consumptive use, 3,850,000 acre-feet of water per annum less the beneficial consumptive use under the priorities designated in sections 1 and 2 above. The rights designated (*a*) and (*b*) in this section are equal in priority. The total beneficial consumptive use under priorities stated in sections 1, 2, and 3 of this article shall not exceed 3,850,000 acre-feet of water per annum.

"SEC. 4. A fourth priority to the Metropolitan Water District of Southern California and/or the City of Los Angeles, for beneficial consumptive use, by themselves and/or others, on the Coastal Plain of Southern California, 550,000 acre-feet of water per annum.

"SEC. 5. A fifth priority (*a*) to the Metropolitan Water District of Southern California and/or the City of Los Angeles, for beneficial consumptive use, by themselves and/or others, on the Coastal Plain of Southern California, 550,000 acre-feet of water per annum and (*b*) to the City of San Diego and/or County of San Diego, for beneficial

[47] The seven-party water agreement was executed for the Palo Verde Irrigation District by Ed. J. Williams and Arvin B. Shaw, jr.; for the Imperial Irrigation District by Mark Rose, Charles L. Childers, and M. J. Dowd; for the Coachella Valley County Water District by Thomas C. Yager and Robbins Russel; for the Metropolitan Water District of Southern California by W. B. Matthews and C. C. Elder; for the City of Los Angeles by W. W. Hurlbut and C. A. Davis; for the City of San Diego by C. L. Byers and H. N. Savage; for the County of San Diego by H. N. Savage and C. L. Byers.

State Engineer Hyatt was assisted by Mr. Conkling.

consumptive use, 112,000 acre-feet of water per annum. The rights designated (*a*) and (*b*) in this section are equal in priority.

"SEC. 6. A sixth priority (*a*) to Imperial Irrigation District and other lands under or that will be served from the All-American Canal in Imperial and Coachella Valleys, and (*b*) to Palo Verde Irrigation District for use exclusively on 16,000 acres in that area known as the Lower Palo Verde Mesa, adjacent to Palo Verde Irrigation District, for beneficial consumptive use, 300,000 acre-feet of water per annum. The rights designated (*a*) and (*b*) in this section are equal in priority.

"SEC. 7. A seventh priority of all remaining water available for use within California, for agricultural use in the Colorado River Basin in California, as said basin is designated on Map No. 23000 of the Department of the Interior, Bureau of Reclamation.

"SEC. 8. So far as the rights of the allottees named above are concerned, the Metropolitan Water District of Southern California and/or the City of Los Angeles shall have the exclusive right to withdraw and divert into its aqueduct any water in Boulder Canyon Reservoir accumulated to the individual credit of said district and/or said city (not exceeding at any one time 4,750,000 acre-feet in the aggregate) by reason of reduced diversions by said district and/or said city; *Provided,* that accumulations shall be subject to such conditions as to accumulation, retention, release, and withdrawal as the Secretary of the Interior may from time to time prescribe in his discretion, and his determination thereof shall be final; *Provided further,* that the United States of America reserves the right to make similar arrangements with users in other States without distinction in priority, and to determine the correlative relations between said district and/or said city and such users resulting therefrom.

"SEC. 9. In addition, so far as the rights of the allottees named above are concerned, the City of San Diego and/or County of San Diego shall have the exclusive right to withdraw and divert into an aqueduct any water in Boulder Canyon Reservoir accumulated to the individual credit of said city and/or said county (not exceeding at any one time 250,000 acre-feet in the aggregate) by reason of reduced diversions by said city and/or said county; *Provided,* that accumulations shall be subject to such conditions as to accumulations, retention, release, and withdrawal as the Secretary of the Interior may from time to time prescribe in his discretion, and his determination thereof shall be final; *Provided further,* that the United States of America reserves the right to make similar arrangements with users in other States without distinction in priority, and to determine the correlative relations between the said city and/or said county and such users resulting therefrom.

"SEC. 10. In no event shall the amounts allotted in this agreement to the Metropolitan Water District of Southern California and/or the City of Los Angeles be increased on account of inclusion of a supply

for both said district and said city, and either or both may use said apportionments as may be agreed by and between said district and said city.

"SEC. 11. In no event shall the amounts allotted in this agreement to the City of San Diego and/or to the County of San Diego be increased on account of inclusion of a supply for both said city and said county, and either or both may use said apportionments as may be agreed by and between said city and said county.

"SEC. 12. The priorities hereinbefore set forth shall be in no wise affected by the relative dates of water contracts executed by the Secretary of the Interior with the various parties."

This agreement was ratified by all of its parties unconditionally, except the Palo Verde Irrigation District. That district attached certain conditions to its ratification which were subsequently approved by the other parties, and on September 28, 1931, the Secretary of the Interior promulgated amended regulations which incorporated the agreement, with Palo Verde's reservation. The substance of the so-called seven-party water agreement was thus adopted as a uniform water-allocation clause to be utilized in all California water contracts. Concurrently, by virtue of the State's approval, it became an allocation by the State. By this quadruple process of agreement, allocation by the State, promulgation of regulations by the Secretary, and incorporation of an identical clause in separate contracts with the United States, the claims of the various parties were placed on an assured basis.

The water contract with the Metropolitan Water District was amended on the same date and it appears in the appendix in final form.

The All-American Canal contract.

The conclusion of the seven-party water agreement made possible the completion of drafting of the All-American Canal contract. That contract, designed to carry out the third objective of the Boulder Canyon project act, was reduced to final form on October 3, 1931. In brief, its form is that of a contract between the United States and the Imperial Irrigation District, obligating the latter to repay the cost of a canal to be constructed by the United States connecting the Imperial and Coachella Valleys in California with the Colorado River. The total cost is limited to $38,500,000 to be payable in 48 annual installments.

The proposed system would start with a new diversion dam, the Imperial Dam, to be built across the Colorado River about 5 miles

above the present Laguna Dam. After leaving the desilting works at the dam, the canal, with a capacity of 15,000 second-feet, would parallel the river to Syphon Drop, at which point 2,000 second-feet would be diverted for the Yuma project. With a capacity of 13,000 second-feet the canal would continue down the river to Pilot Knob, Calif., at which point it would turn westward with a capacity of 10,000 second-feet, dropping the surplus back into the river at Pilot Knob through a power plant. After passing through the sand hills the canal would branch into two parts, one branch connecting with the present Imperial Canal system and the other, over 130 miles long, passing through Coachella Valley to the north for the irrigation of that valley. The contract as drawn conforms to the provisions of the act which have been quoted above; i. e., the investment will be amortized on an interest-free basis by repayments by the district under this contract.

On October 22, 1931, a hearing was held upon objections which had been filed against execution of the contract. The Coachella Valley Land Owners Association objected to the inclusion of their lands in Imperial Irrigation District, and requested a separate contract. The Water Rights Protective Association of Imperial Valley, on the other hand, objected to the inclusion of the Coachella lands, as impairing the sufficiency of Imperial's water supply. Certain objections were filed by the Palo Verde Irrigation District and by persons interested in the Yuma project, in Arizona, and some others. On November 4, 1931, the Secretary signed an opinion disposing of these objections and approving the contract as to form. The opinion appears in the Appendix.

Thereafter the district endeavored to carry out the conditions precedent of the contract, i. e., ratification by the electors of the district, inclusion of the Coachella lands, and confirmation by a court decree. The contract was ratified overwhelmingly by the Imperial electors, but the Coachella landowners ultimately decided not to petition for inclusion. The Imperial Irrigation District thereupon undertook to negotiate a new contract with the United States eliminating the condition requiring Coachella's inclusion. The Coachella landowners, committed to the proposition of obtaining a separate contract (although the Department's opinion of November 4 had pointed out the advantages in a unified system), renewed their request for a separate instrument in which the Coachella area would assume the

sole responsibility for the cost of works necessary to water the valley, but which would be physically connected with the Imperial system.

After protracted negotiations the representatives of the Imperial and Coachella Districts were invited to Washington, and negotiations proceeded here during the month of November, 1932. The United States was represented by Commissioner Elwood Mead, Assistant Commissioner Porter W. Dent, Richard J. Coffey, Solicitor E. C. Finney, and Messrs. Northcutt Ely and Charles A. Dobbel of the Secretary's staff. The Imperial Irrigation District was represented in the All-American Canal negotiations by Directors Mark Rose and John L. Dubois, Chief Engineer M. J. Dowd, and Attorney Charles L. Childers. Director Earl C. Pound participated until his retirement. The Coachella Valley County Water District was represented during the negotiations of 1931 by President R. W. Blackburn and Attorney Thomas C. Yager. During the negotiations of December, 1932, the district was represented by Directors Harry W. Forbes and S. S. M. Jennings and by Attorney Arvin B. Shaw, jr.

The changes ultimately approved by the Secretary resulted in the elimination of the requirement that Coachella lands be included as a condition precedent, and substituted a promise on Imperial's part to include these lands on petition, within 30 days after the contract is confirmed by court. In return, the Coachella lands were assured against assessment for other than expenses required by this contract, until water is available for delivery within the Coachella unit, and the present Coachella District was preserved as an entity. It is given the privilege of collecting and paying obligations of its landowners to the Imperial District and is enabled thereby to utilize powers of taxation differing somewhat from Imperial's. Certain other minor changes were made in the contract, but the Department's basic plan of a unified contract was adhered to.

The instrument was executed by the Secretary on December 1, 1932, and at the present writing the confirmation proceedings are under way. The new contract has been ratified by the district electors, and the Coachella landowners may present their petition at any time up to 30 days after the decree of confirmation becomes final.

The All-American Canal contract, it will be noted, is of a dual character: It is a revenue contract required by section 4–*b* of the

Boulder Canyon project act as a condition precedent to construction of the All-American Canal, and, in addition, it is a water delivery contract, under section 5 of the act. The Metropolitan Water District contract, previously referred to, is of a similar dual character. It is a revenue contract providing funds toward the amortization of Hoover Dam, as required by another paragraph of section 4–*b*, and simultaneously is a water delivery contract pursuant to section 5.

The proposed San Diego contract.

The execution of the Metropolitan Water District and Imperial contracts disposed of the four major California claimants to the waters of the Colorado River. The City of Los Angeles and the Metropolitan Water District are provided for by the Metropolitan Water District contract, and the Imperial Irrigation District and the Coachella Valley County Water District are cared for by the Imperial contract. The remaining three parties to the seven-party agreement of August, 1931, are the Palo Verde Irrigation District, the City of San Diego, and the County of San Diego. The Yuma project requires no contract, as the United States still operates and maintains that project.

It is planned that the City and County of San Diego, acting through the City or a new Metropolitan District will ultimately take water through the All-American Canal, diverting near the end of the Imperial section of the canal, and pumping over or through the mountains to San Diego. The All-American contract provides for use of the canal by other parties upon their entering into contracts with the United States for contribution toward the cost of the works. No such revenue contract has yet been executed by San Diego. However, San Diego's relationship to the United States is not only that of a probable contributor to the revenues of the All-American Canal under section 4–*b* of the project act, but it is also eligible, under the seven-party agreement, as contractor for delivery of water under section 5 of the act, regardless of the manner in which San Diego finally elects to provide for transportation of its water. Some time will probably elapse before San Diego is in a position to contract for the use of the All-American Canal and contribute toward its cost, but in order to insure its water privileges, a separate water contract has been approved by the Secretary, and is included in the Appendix.[48]

[48] The City of San Diego has been represented in these negotiations by Hiram N. Savage, chief hydraulic engineer.

In general, this contract conforms to that of the Metropolitan Water District. The city is required to pay 25 cents per acre-foot for water delivered. In this respect this contract is a revenue agreement providing funds toward the amortization of Hoover Dam; its future agreement for the use of the All-American Canal will provide revenue toward amortization of the All-American Canal feature of the project.

The city is required to commence its diversions within 10 years after the completion of Hoover Dam, as is the Metropolitan Water District.

The contract provides for the delivery of water in accordance with the seven-party agreement, incorporated as a uniform clause in all of the water contracts, and amounting in the case of San Diego to 112,000 acre-feet classified in priority No. 5. It shares that priority with the Metropolitan Water District and the City of Los Angeles, whose joint interest therein is 550,000 acre-feet.

Palo Verde Irrigation District.

A water contract with Palo Verde Irrigation District has been approved by the Department and awaits action by that district.[49] It parallels the water contract of the Metropolitan Water District, except that no charge will be made for water delivered on the project. Palo Verde's priorities are limited to use of water within the district. However, the contract reserves to the parties the right to contract in the future, in accordance with any judicial determination which may establish in Palo Verde rights other than those provided by the seven-party agreement; i. e., rights to use of water elsewhere than within the district. The stipulation for free service does not necessarily apply to such a future contract.

Parker Dam.

A second contract with the Metropolitan Water District has been approved. This relates to the proposed Parker Dam, which will be located on the Colorado River just below the mouth of the Bill William[50] River. This contract, which is included in the Appendix, provides for the construction of a dam by the United States at the

[49] The Palo Verde Irrigation District has been represented by Ed. J. Williams and Attorney Arvin B. Shaw, jr.

[50] The Parker Dam contract was negotiated on behalf of the United States by Messrs. Elwood Mead, Porter W. Dent, E. C. Finney, Northcutt Ely, R. F. Walter, E. B. Debler, R. J. Coffey, and on behalf of the Metropolitan Water District by F. E. Weymouth, general manager, and James H. Howard, general counsel.

sole expense of the Metropolitan Water District, reserving to the United States nevertheless one-half of the power privilege for use in Arizona. The dam will be used as a point of diversion for the Metropolitan Water District and in part for river regulation by the United States. The United States retains control over water passing the dam. From the Government's viewpoint, the dam will be built in aid of ultimate reclamation of the Colorado River Indian Reservation and of the Gila project in Arizona. Statutory authority already exists for the construction of such a dam for these purposes, and the cheap power made available to the Government will expedite by many years the feasibility of reclamation of certain of these areas.

9. WATER FOR ARIZONA

The Department from time to time has endeavored to bring about an agreement between Arizona, California, and Nevada for the division of waters allocated to the lower basin by the Colorado River compact. As outlined on a previous page, the Boulder Canyon project act authorizes such a subordinate agreement, and under the auspices of the Department and the chairmanship of Col. William J. Donovan, conferences between the States were held in March and June, 1929, and again in January, 1930. The disagreement between Arizona and California has centered about the same issue which was responsible for Arizona's failure to ratify the Colorado River compact—inclusion of the Gila River in the waters to be apportioned between the States.

After the power contracts had become effective and work had been started on Hoover Dam, Arizona brought suit in the United States Supreme Court to enjoin the building of the dam, and to declare the Boulder Canyon project act and the Colorado River compact inoperative and unconstitutional. Arizona's bill of complaint filed October 13, 1930, named the Secretary of the Interior and the States of California, Nevada, Utah, New Mexico, Colorado, and Wyoming as defendants. The suit was dismissed on May 18, 1931. The court held that the construction of the dam was within the constitutional powers of Congress, and that Arizona had no basis upon which to complain of the Colorado River compact since she was not bound by it. The court said: "There is no occasion for determining now Arizona's rights to interstate or local waters which have not yet been, or which may never be, appropriated."

It has been the Secretary's policy to establish a firm and equitable basis for future use of water not only in California but also in Arizona, despite the absence of an agreement or adjudication.

The Department has undertaken in four particulars to preserve for Arizona an opportunity to use the waters which Hoover Dam will make available. The task has been complicated by the confusion left over from the days in which Arizona was bitterly opposed to the entire project.

First, 18 per cent of Hoover Dam's firm energy was reserved for use in Arizona. This amounts to the equivalent of about 117,000 continuous horsepower.

Second, the Parker Dam contract with the Metropolitan Water District reserves one-half of the power privilege, amounting to about 40,000 horsepower, for use in Arizona, without contribution by that State or the United States to the capital cost of the dam. Freed of capital investment in the dam, this power will rank among the cheapest power projects in the United States. In addition, the Metropolitan Water District has been required to undertake to transmit Arizona's Hoover Dam power at cost from Hoover Dam to Parker Dam to the extent that excess capacity of the district is available.

Third, in the All-American Canal contract the privilege has been reserved to the United States of using that dam as a pumping basin or diversion heading for irrigation of Arizona lands. The Hoover and Parker power will make feasible the irrigation of the first units of Arizona's proposed Gila project by pumping from Imperial Dam, as well as permit the reclamation of the Colorado River Indian Reservation near Parker.

Fourth, the Department has promulgated regulations designed to assure a water supply to Arizona. These regulations are included as an appendix in this volume. They outline the form of a Hoover Dam water-delivery contract which the United States will enter into with Arizona upon certain conditions. Briefly, the contract calls for the delivery of 2,800,000 acre-feet annually, in return for which Arizona undertakes to make no interference with the diversions by other Government contractors. This quantity of water is adequate for all of the Arizona projects below Hoover Dam, and is without prejudice to the power of the parties to contract in the future for delivery of additional water required. As in the case of the California water contracts, the undertaking relates simply to acre-feet of water stored

by Hoover Dam, without earmarking the discharges under Articles III–A or III–B of the Colorado River compact, or as surplus water. The proposed contract recites the controversy between the two States over the quantity of water available to each under the various provisions of the project act, and makes no attempt to adjust priorities as between the two States. But inasmuch as an entirely new factor, i. e., the building of Hoover Dam and providing of 30,000,000 acre-feet of storage, has intervened after the execution of the Colorado River compact, there is every reasonable assurance that water adequate to supply all of Arizona's and California's needs can be supplied under these contracts, leaving to the future the settlement of a question which in practice will probably never arise: The technical classification of the water discharges under various provisions of the compact. The proposed water contract with Arizona is specifically stated to be without prejudice to the States of the upper basin, and relates solely to water present in the lower basin. Arizona is thus offered an assurance of 2,800,000 acre-feet of main-stream water, and given an opportunity to look to the United States rather than to an agreement with the other States for a delivery of that quantity of water, in return for an agreement not to interfere with diversions by her sister States.

10. SUMMARY

This concludes a brief outline of the events which have made possible the construction of Hoover Dam: The Colorado River compact of 1922, the Swing-Johnson bill of 1928, the power contracts of 1930, the water contracts, the establishment of exclusive jurisdiction and the commencement of construction, the litigation before the Supreme Court which failed to halt the building of the dam. Included in this volume are not only the instruments which have marked the accomplishment of this program to date, but certain others which have been approved as to form and which during the coming years should make possible the peaceful development of the Colorado. These include the remaining water contracts in California, and regulations assuring to Arizona a fair share of water.

The Department has executed eight power contracts, two water contracts, has approved as to form three additional water contracts, two contracts for repayment of the cost of diversion dams, and has approved an Arizona water contract in the form of regulations.

These contracts are summarized in Part II, and their texts appear in the appendixes. The construction contracts are printed separately.

PART II

AN ANALYSIS OF THE CONTRACTS

1. THE POWER CONTRACTS.
   - (*a*) General.
   - (*b*) The lease.
   - (*c*) Contracts with others than the lessees.
2. THE CALIFORNIA WATER CONTRACTS.
   - (*a*) The Metropolitan Water District: Water contract.
   - (*b*) The Imperial Irrigation District: All-American canal contract.
   - (*c*) San Diego.
   - (*d*) Palo Verde Irrigation District.
   - (*e*) The Metropolitan Water District: Parker Dam.
3. THE PROPOSED ARIZONA WATER CONTRACT.

AN ANALYSIS OF THE CONTRACTS

1. THE POWER CONTRACTS

(A) GENERAL

On April 26, 1930, two contracts, carrying an obligation to take and pay for all of the firm energy to be generated at Boulder Canyon, were signed at Los Angeles. The first was a lease of power privileges to which the United States, the City of Los Angeles (through its Department of Water and Power), and the Southern California Edison Co. Ltd. are parties. The second was a contract for the purchase of electric energy, to which the United States and the Metropolitan Water District are parties.

The general framework of these instruments establishes the city and company as several, not joint, lessees of the power plant, obligated to generate at cost for certain other allottees, of which the Metropolitan Water District is the major one. Allottees other than the Metropolitan Water District were accorded by these contracts various time periods within which to execute their separate contracts with the United States for purchase of energy. Ultimately the Los Angeles Gas & Electric Corporation, the Southern Sierras Power Co., and the cities of Pasadena, Burbank, and Glendale entered into such contracts. Contracts have not yet been executed on behalf of the two States of Arizona and Nevada, and the way is kept clear for the States to exercise their option at any time within 50 years. As of the present writing, therefore, eight contractors are obligated to take Hoover Dam's firm energy. The last five of them have acquired their contracts by virtue of "drawback" provisions in the original city, company, and district contracts with the United States.

(B) THE LEASE TO THE CITY OF LOS ANGELES AND THE SOUTHERN CALIFORNIA EDISON CO.

1. *The parties.*

The City of Los Angeles and its Department of Water and Power are, for some purposes, separate entities. Both are parties to this lease. The Department of Water and Power is engaged in the business of generating, distributing, and selling electric energy on behalf

of the city. The Southern California Edison Co. is a California corporation engaged in a similar business through a large southern California area outside the City of Los Angeles.

Articles 2, 3, 4, and 5 constitute explanatory recitals.

6. *Construction by the United States.*

By this lease the United States undertakes to erect in Black Canyon a dam which will raise the water level to a maximum elevation of 1,222 feet above sea level and create 29,500,000 acre-feet of storage. It also undertakes to provide a reservoir, pressure tunnels, penstocks, power-plant buildings, and to furnish and install generating, transforming, and high-voltage switching equipment. The Government does not undertake to provide transmission facilities.

7. *Operation and maintenance of the dam.*

The United States undertakes to operate and maintain the dam, reservoir, pressure tunnels, penstocks to but not inclusive of the shut-off valves at the entrance to the turbine casings, and reserves "full control of all water passing the dam for any and all purposes."

The point of division for operation and maintenance coincides with the division between works whose financing is separately provided for; see articles 9 and 16. The dam and reservoir will be operated and used, as required by the project act—first, for river regulation, improvement of navigation and flood control; second, for irrigation and domestic uses and satisfaction of present perfected rights pursuant to article VIII of the Colorado River compact; and third, for power. As pointed out below, provision is made for the contingencies that these dominant uses will interfere with the operation of the reservoir for power purposes.

8. *Installation of machinery.*

The lease provides that the machinery and equipment for generation of power shall be provided, installed, and owned by the United States. The city and company are required to notify the Secretary of their generating requirements within two months after receipt of notice that the diversion of the Colorado River has been effected. The United States undertakes to provide sufficient generating units and other equipment to provide the energy allocated to and taken by the various allottees. Each lessee is required to give three years' notice in advance of the date on which it requires its generating equipment

to be ready for operation, and provision is made for the later addition of an increased number of units on the same terms. Each allottee and the lessees are given the opportunity to be heard by the Secretary or his representatives upon the design, capacity, and cost of the machinery before contracts therefor are let. Provision for meeting the cost of this machinery is made in article 9.

9. *Compensation for use of machinery.*

The cost of generating machinery under this lease is to be amortized on a separate basis from the cost of the dam itself. Although the leases do not expire until 50 years after water is first available for delivery to the city, the generating equipment is required to be paid for in 10 equal annual installments, beginning with June 1 following the date when water is ready for delivery. These payments to the United States are described as "compensation for the use, for the periods of lease thereof, of the machinery and equipment furnished and installed by the United States." The amount prepaid as rent do not apply to purchase of the equipment. By virtue of this provision the United States will at all times have in its hands generating equipment valued at upwards of $17,000,000, for whose use the lessees have made a prepayment, and which can not be utilized except in performance of these contracts. The United States will not be under the necessity of recapturing this equipment in the event that the contracts are not renewed. The cost of the machinery, of course, includes interest required to be repaid to the Treasury from the Colorado River Dam fund. This provision of the contract means that between $17,000,000 and $20,000,000, or approximately 20 per cent of the Treasury's advances for construction of the dam and appurtenant works, will be paid within 10 years after water is ready for delivery, although the full 50-year amortization period could have been utilized under the project act.

The lessees are not to be charged for machinery installed for the use of a State unless used partially for the benefit of the lessees.

10. *Lease of power plant.*

In article 10 of the agreement the United States leases to the city and to the company, severally, such power-plant units and corresponding plant facilities and incidental structures as may be necessary to generate the energy allocated to each, and to the allottees which each of them is required to generate for. The city's lease commences

when water is first ready for delivery to it and terminates 50 years thereafter. The company's lease ends on the same date as the city's; but by virtue of another provision in the contract (art. 11) the company does not commence to take energy until three years after the city has begun, and the district does not take energy until one year after the city has commenced. The result is that the company's lease is operative for 47 years and the district's contract for 49 years, both subject to renewval.

Article 10 also states the generating obligation of the two lessees. The city is designated as the generating agency for the States of Nevada and Arizona, all the municipalities, the district, and itself.

The Edison Co. is designated as the generating agency for itself and the three other companies named in article 14 of the lease (two of which, the Los Angeles Gas & Electric Corporation and the Southern Sierras Power Co., subsequently contracted).

The designation of generating agencies is subject to two qualifications in favor of the district. The city undertakes to generate for the district not only with capacity installed for the district's purposes, but also with such capacity normally used by the city as can be utilized "offpeak." This contemplates, in other words, a possible supplement to the energy available from the units installed for the district's requirements, in the event that additional energy can be furnished by the city's equipment installed for its own use at times when such demands would not conflict with the requirements of the city and its other allottees.

The right is preserved to the district to enter into a similar "off-peak" arrangement with the company, if necessary.

The same article provides that disputes between the allottees with respect to generation and cost thereof shall be determined by the Secretary, unless otherwise specifically provided in the contract.

Article 35–A permits the disputants in the alternative to proceed by arbitration. It is contemplated in general, however, that disputes between various Government contractors arising out of the use of the Government plant will be settled by the Secretary.

Article 10 also requires that all generation be fixed at cost as provided in article 12.

11. *Assumption of operation of power plant.*

Article 11 provides three stages in which the power plant's equipment is to come into use.

(*a*) The city and the municipalities are entitled to commence taking power when the Secretary announces that 1,250,000,000 kilowatt-hours of energy per year is ready for delivery. This is less than one-third of the ultimate firm output of the plant; it is expected that energy will be ready for delivery prior to completion of the dam.

(*b*) The district will be entitled to commence taking energy when 2,000,000,000 kilowatt-hours of energy per year is available and the Secretary so announces, provided that that date shall not be sooner than one year after energy is ready for delivery to the city. Nevertheless, this date may be advanced by agreement between the United States and the district, and in that event the city will be compensated by the district for interest, depreciation, and maintenance on that proportion of the city's transmission line whose use is reduced by the district's advanced drafts of energy.

(*c*) Energy will be ready for delivery to the company when the Secretary announces that 4,240,000,000 kilowatt-hours of energy per year is available, not sooner, however, than three years after water is first delivered to the city, and not until the water level has reached an elevation of 1,150 feet above sea level (82 feet below the maximum level ultimately decided upon). Nevertheless the Secretary may require the company to assume its obligations at an earlier date, whenever the company's system has a maximum demand in kilowatt-hours equal to its maximum demand at any time during the 12-month period preceding the date when the city commences to obtain energy from Boulder Canyon. In other words, the city, when it commences to take energy at Boulder Canyon, will cease to take energy from the company, and this article contemplates a 3-year period within which the company may proceed toward building back the lost load before beginning to take energy. But if its original load is overtaken before expiration of the 3-year period, the United States may require it to then commence to take Boulder Canyon energy.

Article 11 concludes by providing that upon notice by the Secretary that generating equipment is ready and water is available, each lessee shall assume its operation and maintenance of the power plant and from that time forward the lessees shall severally save the United States harmless as to damage arising out of the operation and maintenance of the respective portions of the power plants.

12. *Operation and maintenance of power plant.*

Article 12 provides that the two lessees shall severally operate their respective portions of the power plant under the general supervision of a "Director appointed by the Secretary." This director, among other powers, will have authority to enforce the Secretary's rules and regulations respecting operation and maintenance of the power plant as provided in article 33, but the contract does not contemplate interference by the director with either lessee's operations, except for the protection of Government property. The lessees are assured by this article, also, the right to be heard prior to any promulgation of regulations or change or modification therein.

This article provides for the method of compensation to the two lessees on account of energy which they generate for allottees other than themselves. The city and the company are severally responsible for the operation and maintenance of the power plant operated by each respectively. But their generating costs on account of energy delivered to other allottees will be repaid to them by the United States in the form of deductions upon the lessees' obligation to the Government, and the United States undertakes to collect these costs from the proper allottees. Cost, except as to "off peak" power (which is separately covered by article 10), is defined to include a proper proportion of an allowance for amortization of the amounts for which each lessee is respectively liable to the United States on account of use of machinery and equipment, and interest on the respective lessees' prepayments for such lessee, plus the proportionate part of any annuity which the Secretary requires to be set up under article 16 on account of reserves against depreciation and replacement. In addition, generating cost is defined to include expenditures made by the respective lessees on account of replacements, operating machinery and equipment, and keeping the same in repair, including reasonable overhead charges. However, the extent of the allowance for these various items and the system of accounting will be prescribed by the Secretary by means of uniform regulations.

A separate division appears in this article relating to the cost of generating secondary energy taken by the United States. The provisions relating to disposition of secondary energy appear in articles 14 and 15 of the lease.

13. *Keeping leased property in repair.*

Article 13 requires that the lessees make no substantial change in any property without the consent of the director (of the power plant) and the Secretary. The "Director," appointed by the Secretary, is intended to have general supervisory powers for the protection of Federal property, and will not operate or manage the plant. Each lessee is required to make all repairs and replacements considered by the Secretary to be necessary for proper operation and maintenance, except such as may be occasioned by the act of God. In the event of failure of either lessee to make such repairs, the United States may effect them at its option and charge the cost thereof, plus 15 per cent for overhead and general expense, to the lessee having control of the property. That obligation bears interest at 4 per cent until paid. It must be paid on June 1 succeeding the date of completion of repairs.

14. *Allocation of energy.*

Article 14 effects in detail the allocation agreed upon by California allottees on March 20 and April 7, 1930, previously referred to.

The allocation is in the form of a reservation by the Secretary of power to contract with all allottees in accordance with the allocation contained in this article, and "the Secretary is authorized by each lessee to enforce against it the rights acquired by such other allottees under such contracts." Each lessee undertakes to generate energy as previously provided in article 10, and to furnish it at transmission voltage in quantities required to meet these allocations.

The allocations are in percentages of the total firm energy. The latter is defined in article 15, infra.

Six major allocations of firm energy are made: A, to the State of Nevada; B, to the State of Arizona; C, to the Metropolitan Water District of Southern California; D, to a group of municipalities; E, to the City of Los Angeles; F, to the Southern California Edison Co. and associated companies. These six allocations are followed by five stipulations and by three supplemental clauses. The supplemental clauses relate to the secondary energy, firm energy allocated to but not used by the district, and firm energy made available by increase in height of the dam.

Taking up the allocations in the order above outlined—

A. Nevada is allocated 18 per cent of the firm energy, and

B. Arizona is allocated a like amount. If either of them does not take its full 18 per cent within 20 years from April 26, 1930, the other

may absorb 4 of the 18 per cent, provided that the total for the two of them shall not exceed at any one time 36 per cent of the total firm energy. These two allocations to the States are protected in more detail by stipulation (V). By that stipulation each State is permitted to contract for energy allocated to it at any time within the period of the lease and may terminate its contract without prejudice to the right to again contract. These State contracts will be made with the Secretary. If the State's demand is for 1,000 horsepower or less, it may become effective or be terminated on 6 months' notice to the director, but if the State has taken a total increment or relinquished a total decrement of 5,000 horsepower within the preceding 12 months, two and one-half years' notice is required. The director in turn is to pass on the notice to the lessees. Whenever the amount in use by a State is in excess of 5,000 horsepower of the maximum demand, the lessees must be compensated for property rendered idle by the use of such excess. The Secretary is to determine the amount.

The same stipulation provides that energy not contracted for by the States shall be available for use by the district, and if not in use by the States or the district, shall be taken and paid for equally by the city and company. In other words, the city and company are firmly obligated to take and pay for the 36 per cent allocated to the States, subject to the right of the States and the district to demand release of such energy. The contract further provides that both States shall have the right to execute firm contracts within the period allowed by section 5–c of the Boulder Canyon project act. This period expired at the latest within 6 months after execution of the lease, and this clause of the contract was not taken advantage of by the States.

C. To the Metropolitan Water District four types of allocations were made (all limited strictly to use "for pumping Colorado River water into and in its aqueduct"), thus:

1. Thirty-six per cent of the total firm energy, plus
2. All secondary energy (defined in art. 17), plus
3. So much of the firm energy allocated to the States, the city, and the company as may not be in use by them. Theoretically the district could, by virtue of this clause, become the user of 100 per cent of the firm energy generated at Hoover Dam, but in fact the obligations of the city and company are such that it is unlikely that the district will ever have an opportunity to utilize firm energy

in excess of its own 36 per cent, plus, temporarily, the States' 36 per cent. Energy allocated to the States but temporarily not used by them must be yielded to the district by the city and company equally, unless the two lessees agree on a different ratio. But this obligation to release State energy is subject to two qualifications. (*a*) If the district makes a firm contract with the Secretary for any unused State energy, it can be made only upon two years' notice to the Secretary, with compensation to the lessees for main transmission line property rendered idle thereby; (*b*) alternately if the district does not make a firm contract with the Secretary for unused State energy, energy allocated to the States but not in use by them will be released to the district by the lessees upon not less than 15 months' written notice to the Secretary and with compensation to the lessees, which will include cost and overhead of replacing energy which would otherwise have been received at the Pacific coast end of main transmission lines by the lessees. Such cost is defined to include various elements which were the subject of agreement between the district and the two lessees before incorporation in this contract. It is provided that, in the event of failure to agree upon the compensation, the energy shall nevertheless be released to the district, and the parties will proceed with arbitration under article 35–A of this contract. And the district's use of unused State energy, and of secondary energy as well, is subject to the further qualification that it can not call upon these supplementary sources during any year unless it has used, since the preceding June 1, one-twelfth of the firm energy it is obligated to pay for, for each of the months which have elapsed since June 1. In other words, the district may not call upon these supplemental sources of energy until it has, in each month, exhausted one-twelfth of its own allocation of 36 per cent of the annual firm output.

4. The fourth allocation to the district is in the form of an arrangement by the city and the company to furnish substitute energy to the district in the event of a temporary deficiency in secondary energy regularly used by the district. This is not a firm commitment, but is in the form of permission to the city and company to release such energy as they may agree upon to the district on the same terms of compensation as will apply to State energy released by the lessees to the district.

D. Six per cent of all firm energy was allocated to the municipalities of Anaheim, Beverly Hills, Burbank, Colton, Fullerton, Glendale,

Newport Beach, Pasadena, Riverside, San Bernardino, and Santa Ana to be allocated between them as they might agree, subject to allocation by the Secretary if they failed to agree before April 15, 1931. This time was subsequently extended by mutual agreement to November 16, 1931, and by that date the cities of Pasadena, Glendale, and Burbank had entered into contracts. This allocation is subject to stipulation II. That stipulation requires the city to take and pay for so much energy as the municipalities do not contract for, "or, if contracted for, not used by them directly or under contract for municipal purposes and/or distribution to their inhabitants." The three municipalities ultimately contracted for 4.0946 per cent, leaving a margin of 1.9054 per cent to be absorbed by the city.

E. Thirteen per cent was allocated to the City of Los Angeles. Unlike the allocation to the municipalities, this energy is not subject to limitation as to use; the limitation on the municipalities was mutually desired by them and by the City of Los Angeles, as the latter is residuary allottee of the municipalities' energy. The city's allocation is subject to the particular effect of stipulations I, II, and V. The first requires the city to take and pay for one-half of the State power not in use by the district. The second requires the city to take and pay for energy allocated to but not used by the municipalities. This residuum of 1.9054 per cent raised the city's total allocation of energy to 14.9054 per cent. Stipulation V contains not only the provisions relating to release of energy to the States referred to under A above, but also a proviso that the combined allocation of 19 per cent to the municipalities and the city be not reduced on account of any firm contract made by a State. However, as the time for execution of such a firm contract has now expired, this safeguard has no further application.

In addition to these two allocations (13 per cent direct and 1.9054 per cent as a residuum from the municipalities), the city has become the allottee of all energy made available by the 10-foot increase in water level authorized by the Sibert board during the negotiation of these contracts. This energy is referred to in the discussion of the last paragraph of article 14, infra.

F. Nine per cent, in all, was allocated to four public utility companies, the Southern California Edison Co. (Ltd.), the Southern Sierras Power Co., the San Diego Consolidated Gas & Electric Co., and the Los Angeles Gas & Electric Corporation. These companies,

like the municipalities, were to have until April 15, 1931, to agree among themselves on an allocation, failing which the Secretary should determine the share of each. By mutual agreement their time was also extended to November 16, 1931, and ultimately the Southern Sierras Power Co. and the Los Angeles Gas & Electric Corporation executed contracts for 0.9 per cent each. By virtue of Stipulation III the Edison Co. retained the residuum, 7.2 per cent. The San Diego Co. did not proceed. The terms of these two company contracts are discussed at a later page.

The foregoing six allocations disposed of all of the 4,240,000,000 kilowatt-hours originally available. As the contracts stood on the date of execution, the Metropolitan Water District was obligated to take 36 per cent, the city 37 per cent, and the company 27 per cent, subject to drawback provisions in favor of the States, municipalities, and three other utility companies. By virtue of exercise of these options by the municipalities and two utility companies, the obligations now stand as follows: Metropolitan Water District, 36 per cent; Los Angeles, 32.9054 per cent; Pasadena, 1.6183 per cent; Glendale, 1.8867 per cent; Burbank, 0.5896 per cent; Southern California Edison Co. Ltd., 21.6 per cent; Southern Sierras Power Co., 2.7 per cent; Los Angeles Gas & Electric Corporation, 2.7 per cent. These allocations, save as to the municipalities, are subject to flexible readjustment when and if the States take the energy allocated to them, or the district demands unused State energy. If State energy is withdrawn, Los Angeles will be reduced to 14.9054 per cent, the Edison Company to 7.2 per cent, and the other two utilities to 0.9 per cent each.

The remainder of the article, following this disposition of firm energy, consists of three paragraphs.

Secondary energy is allocated to the district. The city and the company are each given the right to purchase and use one-half of all secondary energy not used by the district, and any secondary energy not used by one lessee shall be available for the time being to the other. If secondary energy is not taken by the city, the district, or the company, the United States reserves the right to make other disposition of it, paying the lessees for the cost of generation as provided by article 12, and disposing of such power subject to the prior right of the district and the lessees, as also required by that article.

Firm energy allocated to but not used by the district is subject to use by the city and company equally, crediting the proceeds on the district's obligation, but it is provided that no disposition of the district's allocation, in event of failure to use, will be made without giving an opportunity to a successor to the district which may undertake to build or maintain the Colorado River Aqueduct, the opportunity to use the energy for that purpose, on the same terms as the district.

The last paragraph of this article provides for the event that the height of the dam is increased so as to provide a maximum water surface allocation in excess of 1,222 feet above sea level. Such authorization was in fact given by the Sibert board during the negotiation of these contracts and after the allocation had been agreed upon. In this paragraph the United States reserves the right to dispose of additional energy not to exceed 90,000,000 kilowatt-hours per year to a municipality, and it is provided that additional energy not so contracted for shall be taken and paid for by the city, and that in any event its generation shall be effected by the city. For some time the City of San Diego considered the possibility of contracting under this clause, and was afforded opportunity to do so; but Hoover Dam power appeared financially unattractive to all municipalities other than the three mentioned above. This energy consequently became fixed as part of the city's obligation.

15. *Firm and secondary energy defined.*

The allocation discussed under article 14 disposed of firm energy among six groups and disposed of secondary energy separately. Article 15 defines these two classes of energy. Firm energy is defined to be 4,240,000,000 kilowatt-hours per year, measured at transmission voltage. This figure applies only during the first year of operation, June 1 to May 31, inclusive. For every subsequent year the amount defined as firm energy will be decreased by 8,760,000 kilowatt-hours. However, the Secretary reserves the right to fix a lesser rate of decrease during the year if actual conditions do not accord with the decrease contemplated. This diminution of firm energy will be occasioned by up-river development and gradual silting of the reservoir.

Secondary energy is defined to include all energy in excess of the amount defined as firm energy, and the right of any party to take

secondary energy allocated to it after discharge of that party's obligation to take and pay for firm energy is not to be impaired by reason of the fact that another contractor has not discharged its obligation to pay for firm energy.

Article 15 contains a proviso against diminution of the quantity of firm energy on account of unforeseen contingencies, i. e., international obligations arising through treaty or otherwise subsequent to the effective date of the contract, or by reason of interference with the construction of the dam, or other contingencies. It is provided further that if for any reason the United States is wholly unable to fulfill its obligations in respect to the delivery of water, either lessee may terminate the contract in so far as it is affected.

The additional energy allocated to the city on account of increased height of the dam (90,000,000 kilowatt-hours) is made subject to its pro rata deduction on account of the annual diminution of firm energy.

16. *Schedule of rates.*

Article 16 describes three classes of consideration moving to the United States from the lessees. They severally undertake—

(1) To pay the United States for the use of falling water for generation of their own energy. The rate stated is 1.63 mills per killowatt-hour for firm energy and 0.5 mill per killowatt-hour for secondary energy, both delivered at transmission voltage.

(2) To compensate the United States for the use of leased equipment as elsewhere provided. (See art. 9.)

(3) To maintain the equipment in first-class operating condition, including repairs and replacements. It is provided, however, that in the event expenditures for replacements exceed at any time the sum accumulated by the lessees as a depreciation reserve in accordance with the Secretary's regulations, less amounts previously withdrawn for replacements, then the rates shall be readjusted so as to reimburse the lessees for excess expenditures within the term of the lease.

This article further provides for periodical readjustment of rates, the method of arriving at rates on such readjustments, and certain contingencies in the event the contracts are not renewed on their expiration date. As required by the Boulder Canyon project act, it is provided that at the end of 15 years from date of execution of

the contract (April 26, 1930), the rates for firm and secondary energy shall be readjusted upon demand of any party upward or downward as to price as the Secretary may find to be justified by competitive conditions at distributing points or competitive centers. It is provided that the rate for falling water shall be uniform for both lessees and shall be computed by deducting from the price of electrical energy justified by competitive conditions at distributing points the following:

(1) Fixed and operating costs of transmission to such points;

(2) Fixed and operating costs of the lessee's portion of the power plant including repairs and replacements. It is stipulated that the readjusted rate shall under no circumstances exceed the value of such energy based upon competitive conditions. In this connection it should be pointed out that the lessees do not undertake a commitment to provide revenues in the amount necessary to amortize the cost of the dam; they undertake to pay specific prices which the Secretary has independently found will be sufficient to effect amortization. The preamble to the lease provides in article 3 that the Secretary has made such a determination. Accordingly, the rate is not subject to diminution in the event that the dam costs less than expected, nor to increase if the cost exceeds expectations. The rate is subject to readjustment solely on the basis provided by the act, recited in this article.

Article 16 further provides as to the respective rates for firm energy and secondary energy that recognition has been given the fact that secondary energy will not be continuously available, and that factor shall be taken into account in the readjustment of the rate for secondary energy.

The article further provides that in the event that either lessee shall not obtain a renewal of its contract on the expiration date, that it will be entitled to an equitable adjustment for major replacements of machinery made between the date of the last readjustment of rates and the end of the contract period. This clause contemplates the possibility that the life of the machinery may be such that replacements must be made within a few years preceding the end of the contract period, and at the lessee's cost. In such an event this article will provide for compensation to the lessees in the event their contract is terminated, equivalent to the unused life of the replacements.

17. *Minimum annual payment.*

Article 17 states the minimum annual obligation of each lessee. The city undertakes to take and/or pay for each year 37 per cent of all firm energy. The city further agrees to take and/or pay for the 90,000,000 killowatt-hours additional made available by the increase in height of the dam. The Edison Co.'s minimum obligation is stated as 27 per cent of all firm energy.

The minimum annual payment required from each lessee is stated to be the number of killowatt-hours of firm energy which it is obligated to take and/or pay for, multiplied by 1.63 mills per killowatt-hour. These payments, of course, are in addition to payments on account of use of machinery and the creation of depreciation and replacements reserves. (See art. 16.)

A load-building period is provided in favor of the two lessees. For the first three years of operation by each of them the minimum annual payment will amount to certain percentages of the ultimate annual obligation, as follows:

	Per cent
First year	55
Second year	70
Third year	85
Fourth and all subsequent years	100

During this absorption period energy taken by either lessee in excess of these percentages of firm energy will be paid for at the rate for secondary energy. This question of load-building periods was one of difficult adjustment in the negotiation of the contracts. The city, when it commences to take Boulder Canyon power, will cease to take an equivalent amount from the Edison Co., which is the other lessee, and the latter will be under the necessity of replacing this load. However, the contract entitles the city also to this load-building period.

18. *Monthly payments and penalties.*

Article 18 requires the lessees to pay for their energy monthly. One-twelfth of the annual firm energy obligation must be paid each month, and only energy taken in excess of that obligation during the month is computed at the secondary energy rate. Bills will be submitted monthly on the fifth of each month and payment is due on the first day of the month following. Defaults are subject to a penalty of one per cent per month on the amount unpaid.

19. *No energy to be delivered without payment.*

Article 19 requires each lessee to cease generation for its own account if it is in arrears for more than 12 months. This article also requires the lessee to cease generation for any allottee upon notice from the Secretary that the allottee is in arrears.

20. *Contract may be terminated in case of breach.*

Article 20 provides for certain remedies to the United States in the event of breach of the terms of the contract. Two types of default are provided against: (1) Failure of the lessee to generate energy on behalf of other allottees and (2) failure of the lessee to make monthly payments to the United States for 12 months. A series of remedies is provided.

In the event of default of either type, the Secretary reserves the right to immediately enter and operate the plant at the expense of the defaulting lessee. It will be noted that entry may be made immediately on default or failure to furnish to another allottee although 12 months' delinquency is required before taking over the plant for failure of the lessee to pay for its own energy.

A second remedy provided is termination of the contract on two years' notice in the event of default of either of the two types noted above. On termination of the contract the lessees are required to return all property to the United States in as good condition as when received, reasonable wear and tear and damage by the elements excepted. Nevertheless, each lessee is assured a 10-year period of redemption, beginning from the date of first default. Within this period it may, by removing all causes which resulted in termination, including the payment of penalties, become reinstated under the contract. Since under article 9 the United States requires the lessees to prepay, during 10 years near the beginning of the contract period, the entire cost of machinery, this redemption period is roughly equivalent to the security placed in the Government's hands by that prepayment.

These remedies of repossession and termination do not relieve the lessees from their obligations to pay in money the minimum annual obligation fixed in the contract. (See arts. 16, 17, 18, 19.)

21. *Delivery of water.*

Article 21 states the obligation of the United States to deliver water to the lessees for generation of energy. The United States undertakes to deliver water continuously in the quantity and manner and at

the times necessary for the generation of energy which the lessees have the right or obligation to generate under the contract, in accordance with the load requirements of each lessee and of the allottees which they serve. Nevertheless, this undertaking is qualified by the exception "that such delivery shall be regulated so as not to interfere with the necessary use of Boulder Canyon Dam and reservoir for river regulation, improvement of navigation, flood control, irrigation, or domestic uses and the satisfaction of present perfected rights", and is made subject to the Colorado River compact. The same article provides for the contingency that deliveries of water are insufficient to meet the lessees' generating requirements. It provides that if delivery of water is reduced below the amount required "for the normal generation of firm energy for the payment of which said lessee has hereby obligated itself" the compensation to the lessee will be in the form of a deduction from its power bill for that year, and in an amount fixed by multiplying the hours of discontinuance by the rate being charged for firm energy; or if the reduction is partial, the deduction is computed on a basis in proportion to the percentage of curtailment. The deduction is not in the form of a lessened rate per kilowatt hour. The phrase "normal generation of firm energy" was adopted as limiting the Government's obligation to meet only reasonable demands conforming to the usual load curves of the lessees and their allottees. It was considered impossible to stipulate in figures, against a 50-year operating period, exact load factors or demand curves.

The United States reserves the right to decrease, discontinue, or reduce delivery of water for various purposes such as maintenance, replacements, investigations, etc., on reasonable notice except in case of emergency. It is provided further that no liability shall accrue against the United States on account of damage arising on account of drought, hostile diversion, act of God, etc. Interruptions in delivery of water occasioned by such causes are subject to deductions in the lessees' power bills as above described.

22. *Measurement of energy.*

Article 22 provides for the measurement of energy at generator voltage and suitable computations for arriving at the quantity of energy delivered at transmission voltage. The latter is the basis of the energy allocation in article 14 and of rates as provided in article 16.

23. *Record of electrical energy generated.*

Article 23 requires filing of monthly reports with the plant director showing the quantity of energy generated and its disposition.

24. *Inspection by the United States.*

Article 24 reserves to the Secretary and his representatives the right of inspection of all works of the lessees and their books and records relating to generation, transmission, and disposal of electrical energy under the contract.

25. *Transmission.*

Article 25 states the obligation of the two lessees to transmit for certain other allottees.

(*a*) The city undertakes to operate and maintain, at cost, transmission lines of the Metropolitan Water District required for transmission of Boulder Canyon power to the district's pumping plants, provided that the district may, at its election, operate and maintain such lines itself. Disputes between the two are to be settled by arbitration, pursuant to article 35–A. In the event of such a change of transmission agencies, the Secretary is to cause delivery to be made to the district instead of to the city at transmission voltage.

(*b*) The city undertakes to transmit over its main transmission lines all power allocated to the municipalities, to be compensated therefor on a basis of a reasonable share of the cost of construction, operation, and maintenance of the line. The municipalities were given the opportunity in this article to make other transmitting arrangements before April 15, 1932, provided that the city's load should not thereby be reduced below 19 per cent of the firm energy generated. This proviso was inserted in order to assure the city what it considered to be a minimum load for efficient operation of its transmission lines. Three municipalities—Pasadena, Burbank, and Glendale—eventually contracted with the United States and also entered into transmission contracts with the city, which are printed elsewhere in this volume. These contracts, although not Government instruments, were prepared in collaboration with the Bureau of Reclamation as to those features interlocking with the Government power contracts. Under both the transmission contract and the lease, it is stipulated that disputes between the city and the municipalities over cost of transmission will be determined by arbitration.

(*c*) The company undertakes to transmit over its main transmission line power allocated to and used by the other three utilities. Of these, the Southern Sierras Power Co. and the Los Angeles Gas and Electric Corp. ultimately contracted with the United States. Transmission arrangements are subject to adjustment between the Edison Co. and the other utilities, and no contract between them is included in this volume.

Article 25–C provides that disputes between the utilities over transmission shall be settled by arbitration, as provided in article 35–A.

26. *Duration of contract.*

Article 26 provided that the contract would become effective as soon as the first act of Congress appropriating funds for commencement of construction of the dam should become law. That appropriation act became effective on July 3, 1929. Under this article the lease contract remains in effect for a period of 50 years from the date at which energy is ready for delivery to the city as announced by the Secretary (see article 11). This means that the contracts are actually in force for a probable period of 55 years, depending upon the date at which energy is first available for the city. Pursuant to article 11, the city and municipalities will be taking energy for 50 years, the district for 49, the utilities for 47, and the States for such times as they may elect within the 50-year period. These periods are subject to some fluctuation, as pointed out in the comment on article 11, inasmuch as the district and the companies may, under certain circumstances, commence to take energy at earlier dates than those indicated above.

Article 26 further provides, in accordance with the project act, that the holder of any contract for electrical energy, including the lessees, if not in default, shall be entitled to a renewal upon terms and conditions authorized or required under then existing laws and regulations, unless the property of such holder, dependent for its usefulness on a continuation of the contract, be purchased or acquired and the contractor compensated for damages to its property which although not taken, is damaged by reason of the termination of the supply of electrical energy.

27. *Title to remain in the United States.*

Article 27 provides, as required by section 6 of the Boulder Canyon project act, that the title to the dam, reservoir, and incidental works shall forever remain in the United States. This stipulation, read in

connection with Article 9, applies also to all generating machinery and appurtenant equipment furnished by the United States.

28. *Electrical energy reserved for the United States.*

Article 28 contemplates the use of a maximum of 10,000 kilowatts of Hoover Dam energy by the United States. Each lessee undertakes to furnish 5,000 kilowatts at cost, to be paid for by crediting on monthly power bills. The use of this energy is restricted to construction, operation, and maintenance purposes, diversion of water for irrigation and domestic uses, and against resale to others than officers and employees and construction contractors of the United States and their employees. This power will be available for use in construction of other dams on the river and for irrigation and domestic uses on Federal projects. It is not limited by the contract as to place of use.

29. *Use of public and reserved lands of the United States.*

Article 29, paraphrasing the project act, grants directly to the lessees the use of public and reserved lands of the United States necessary or convenient for the construction, operation, and maintenance of main transmission lines, together with lands designated by the Secretary for use in camp sites, residences for employees, etc., and other uses incident to the operation of the power plant.

30. *Priority of claims of the United States.*

Article 30, in the language of the project act, provides that claims of the United States arising out of the contract shall have priority over all others, secured or unsecured.

31. *Other contracts.*

Article 31 relates to existing contracts between the city and the company, and was designed to dispose of doubt as to whether either of the lessees was precluded by these contracts from entering into the present contract for purchase of energy. This article stipulates that the execution of the contract by the city and performance of its obligations thereunder shall not be deemed in violation of any provision of any contract between the city and the company previously executed.

32. *Transfer of interest in contract.*

Article 32 stipulates that no voluntary transfer of interest in the contract shall be made by either lessee without the consent of the other, and that any successor of either lessee shall be subject to all of the terms of the contract. It is provided, however, that mortgage

or trust deeds or judicial sales made thereunder shall not be deemed voluntary transfers. Nevertheless, persons acquiring the lessee's interest by mortgage, trust, or judicial sale become subject to the obligations of the contract.

33. *Rules and regulations.*

Article 33 provides that the contract shall be subject to the Secretary's rules and regulations, but provides that no right of either lessee shall be impaired or obligation extended by such regulations. This article guarantees also to both lessees an opportunity for hearing prior to promulgation. In practice, this procedure has been followed as to all the changes made in the regulations since the contracts were executed.

34. *Agreements subject to Colorado River compact.*

Article 34, as required by the project act, subjects the contract to the Colorado River compact.

35. *Disputes and disagreements.*

Article 35 contains two provisions with reference to arbitration: (*a*) As to disputes between lessees or between a lessee and another allottee, and (*b*) between a lessee and the United States.

(*a*) As to disputes between the lessees or between the lessee and another allottee, arbitration is stipulated in advance. The method is the appointment by each party of one arbitrator and the choice by them of a third, the Secretary to name the third if the first two fail. The arbitrators' award may be enforced by court proceedings or by the Secretary in his discretion. Decision by the arbitrators, or their failure to decide within six months of appointment of the third arbitrator, is a condition precedent to suit.

(*b*) Arbitration between the United States and a lessee is made optional. But in the event that the parties elect to arbitrate, the method is stipulated. The Secretary is to name one arbitrator and the lessee or lessees shall name one, and these two are to elect three others. In the event of their failure to elect the three within five days after their first meeting, the senior judge of the United States Circuit Court of Appeals is to make the selection.

36. *Contingent upon appropriations.*

Article 36 provides that the contract is subject to appropriations being made by Congress from year to year in sufficient amount to do the work provided for in the contract, and to there being suffi-

cient money in the Colorado River Dam fund for such work. It is stipulated that no liability shall accrue against the United States or its employees by reason of failure of appropriations or lack of money in the Colorado River Dam fund, but it is provided that if Congress fails to appropriate money within five years of execution of the contract, or if for any other reason construction is not commenced within that time and completed with reasonable diligence, any party may terminate its obligations upon one year's written notice to the other parties. Work was actually started within three months of execution of the contracts and has been diligently prosecuted.

37. *Modifications.*

Article 37 provides that any modification, extension, or waiver made by the Secretary in favor of any lessee or allottee shall not be denied to any other.

38. *Member of Congress clause.*

Article 38 contains a prohibition, required by statute, against benefit to a Member of Congress, etc.

39. *Signatures.*

The contract was closed on April 26, 1930, in Los Angeles, by the signatures of John R. Haynes for the city and its department of water and power, of John B. Miller for the Southern California Edison Co. Ltd., and acceptance of the instrument by the Federal representative for transmittal to the Secretary.

(c) POWER CONTRACTS WITH ALLOTTEES OTHER THAN THE LESSEES

Simultaneously with the execution of the lease to the city and company, a contract was entered into on April 26, 1930, with the Metropolitan Water District of Southern California for the purchase by the latter of electrical energy. Similar contracts were later entered into with the Los Angeles Gas & Electric Corporation on November 12, 1931, the Southern Sierras Power Co. on November 5, 1931, the City of Pasadena on September 29, 1931, the City of Glendale on November 12, 1931, and the City of Burbank on November 12, 1931.

The following are the points in which the contracts with allottees differ from each other and from the provisions of the lease.

Minimum annual payment.—The district was accorded (art. 14) a load-building period similar to that of the two lessees, as its aqueduct will probably not be fully loaded at the outset. No such provision appears in the contracts of the other allottees.

Performance bond.—Article 28 of the district contract requires the district to post a performance bond on demand of the Secretary. This provision does not appear in the contract of the other allottees. The lessees' prepayment for machinery constitutes security for performance, aside from their investment in transmission lines. And as the company remains obligated to take and pay for all energy not taken by the two utilities, and the city remains obligated to take all energy not taken by the three municipalities, a bond requirement was therefore not necessary in the contracts of these other allottees.

Duration of contract.—As has been pointed out in a discussion of the city and company lease, all contracts terminate on the same date, i. e., 50 years after the date at which energy is ready for delivery to the city. The city and the municipalities begin to take energy simultaneously; the district one year later; and the three utilities three years after the city first takes energy.

Charges to be paid the United States.—All allottees undertake to pay the United States for credit to the lessees on account of the use of leased equipment in generating energy for the allottees.

Allocation of electrical energy.—The allocation in the lease and the Metropolitan contracts is identical. But the city and municipalities on the one hand and the Edison Co. and the utilities on the other hand entered into different arrangements among themselves for sharing the energy allocated to the two groups. The allocation clause in these five contracts is therefore not uniform in two particulars:

1. Pursuant to the arrangement between the city and the municipalities, the city remains solely obligated to take and pay for one-half the unused State energy, and that obligation is not shared by the municipalities. In return, the city retains the right to take its original share of secondary energy in the event of failure by the district to do so, and the municipalities acquire no such right.

2. But by agreement between the company and the two utilities, the latter each undertake to assume 10 per cent of the company's original obligation and benefits; i. e., each of them undertakes to take and pay for 10 per cent of the State energy which the Edison Co. would otherwise be required to take, as well as 10 per cent of the 9 per cent of firm energy which constituted the Edison Co.'s original firm allocation; and in return each of them receives 10 per cent of such secondary energy as the Edison Co. may be privileged to take.

In these respects the allocation as it appears in Article 7 of the contracts with the Los Angeles Gas and Electric Corp. and the Southern Sierras Power Co. differs from the allocation as it appears in Article 14 of the lease and in Article 7 of the district contract and Article 7 of the municipalities contracts.

Generation and transmission.—The contracts differ in designation of generating and transmitting agencies as between the allottees, of course.

Taxation.—The municipalities (art. 21) also undertake severally to levy and collect taxes necessary to pay the United States, if required. This provision does not appear in the contracts of the City of Los Angeles or of the district; each of the latter is self-liquidating, whereas the municipalities are dependent on the city's construction and operation of transmission lines for the receipt of their power.

2. THE CALIFORNIA WATER CONTRACTS

(A) THE METROPOLITAN WATER DISTRICT WATER CONTRACT

This contract was executed on April 24, 1931, in 22 Articles, one day in advance of the execution of the power contracts.

Articles 1–5 are explanatory recitals.

6. *Delivery of water by United States.*

This article as originally drawn accorded with an agreement of February 21, 1930, between the district and other water claimants. The United States agreed to deliver 1,050,000 acre-feet annually. After the new seven-party agreement of August 18, 1931, the water contract was amended on September 28, 1931, to accord with it. The language used is uniform, as to allocations, with the other Federal water contracts.

This article contains 12 sections which make an apportionment in the form of seven priorities.

Section 1 accords a first priority to the Palo Verde Irrigation District of water for use within that district on a gross area of 104,500 acres. As this land is near the river bank and a large return flow can be expected, no attempt was made to fix a number of acre-feet.

Section 2 accords a second priority to the Yuma project for use within the limits of that project in California in an amount required by 25,000 acres. As in the case of Palo Verde, no figure in acre-feet was stated, but see the limitations in section 3 on the total of priorities 1, 2, and 3.

Section 3 runs jointly in favor of (*a*) Imperial Irrigation District and other lands to be served from the All-American Canal in Imperial and Coachella Valleys, and (*b*) Palo Verde Irrigation District. The quantity is 3,850,000 acre-feet less beneficial consumptive uses under sections 1 and 2. Palo Verde's share in this third priority is the water required for use on 16,000 acres of the "Lower Palo Verde Mesa"; the balance is allocated collectively to the Imperial Irrigation District and the other lands named. The two rights designated (*a*) and (*b*) are equal in priority.

Section 4 recognizes a fourth priority in the Metropolitan Water District and/or the City of Los Angeles, for use on the Coastal Plain, amounting to 550,000 acre-feet annually.

Section 5 accords a fifth priority jointly to (*a*) the Metropolitan Water District and/or the City of Los Angeles and (*b*) the City and/or County of San Diego. Right (*a*) is in the amount of 550,000 acre-feet and (*b*) is in the amount of 112,000 acre-feet. The rights designated (*a*) and (*b*) are equal in priority.

Section 6 recognizes a sixth joint priority in (*a*) the Imperial Irrigation District and other lands served by the All-American Canal in Imperial and Coachella Valleys, and (*b*) the Palo Verde Irrigation District for use on 16,000 acres in the lower Palo Verde Mesa. These two rights are equal in priority and total 300,000 acre-feet.

Section 7 grants a seventh priority of all remaining water available for use in California "for agricultural use in the Colorado River Basin in California."

The remaining five sections are supplemental in character.

Section 8 states the agreement of all the allottees that the Metropolitan Water District and/or the City of Los Angeles may have the right to divert water accumulated in the Boulder Canyon Reservoir by reason of reduced diversion by the district and/or the city, up to 4,750,000 acre-feet; but a proviso states that all accumulations shall be subject to such conditions as to accumulation, retention, release, and withdrawal as the Secretary may prescribe, and the United States reserves the right to make similar arrangements with users in other States. This accumulative-storage provision was the result of a compromise between the Metropolitan Water District and agricultural claimants and was part of the consideration for which the Metropolitan District agreed to the relative priorities assigned to it. (Secs. 4 and 5–c.) Representatives of the United States, during the

negotiation of the seven-party agreement of August 18, 1931, insisted on the proviso quoted, whereby the Secretary reserves the power to prescribe conditions under which the privilege may be exercised. The City of Los Angeles ratified the seven-party agreement subject to a reservation that its approval should not prejudice its power contract with the United States. The power lease (Art. 6) contemplates a total storage capacity of 29,500,000 acre-feet.

Section 9 is like section 8 except that the parties in whose favor it runs are the City and/or County of San Diego and the quantity is 250,000 acre-feet.

Section 10 provides that the allocations to the Metropolitan Water District and/or the city represent a total for the two, and not a separate allocation to each.

Section 11 is like section 10, except that the parties named are the city and/or county of San Diego.

Section 12 stipulates that the priorities stated are not to be affected by relative dates of water contracts executed by the Secretary with the various parties.

This ends the quotation of the seven-party water agreement as employed in all the Federal water contracts.

The next succeeding paragraph reserves authority to the Secretary to contract with any allottee in accordance with the outline of priorities just given. Further, he reserves the right stipulated by the conditions attached to Palo Verde's ratification of the seven-party agreement, i. e., to contract with that irrigation district either in accordance with the quoted schedule, or, if that allocation is substituted by another agreement or by a final judicial determination, to contract with the Palo Verde Irrigation District in accordance with such agreement or determination, provided that the Metropolitan water priorities noted fourth and fifth should not therefore be disturbed.

The balance of the article recites that water shall be delivered as reasonably required for the district's purposes, but subject to the condition that the dam shall be used as required by the project act; i. e., first for regulation, improvement of navigation, and flood control; second for irrigation and domestic uses and satisfaction of present perfected rights; and third for power. Here also is the stipulation required by the project act that the contract is subject to the Colorado River Compact. The United States reserves the right

temporarily to discontinue water for purposes of investigation, inspection, maintenance, repairs, replacements, etc., at Hoover Dam, on notice, however, where practicable. No liability is attached to the United States for suspension in delivery of water.

The Metropolitan contract adds a proviso here which does not appear in the Imperial Irrigation District's contract; i. e., requiring the district to divert water within 10 years after completion of Hoover Dam, subject to cancellation of the contract on written order of the Secretary.

(B) THE ALL-AMERICAN CANAL CONTRACT

The All-American Canal contract, as executed by the Secretary of the Interior on December 1, 1932, contains 39 articles. In general it contemplates development of all the area to be served by the proposed canal by a single agency, the Imperial Irrigation District, which undertakes to extend its borders to cover the land served and to repay the cost of all works constructed by the United States, in 40 annual installments, commencing when water is ready for delivery. Part of the lands to be absorbed lie within the Coachella Valley County Water District.

The first six articles are explanatory recitals.

7. *Construction by the United States.*

The United States undertakes to construct the Imperial Dam, in the main stream of the Colorado River at a point identified on a map. This point is about 5 miles above the existing Laguna Dam. The Government also undertakes to build a canal connecting this dam with the Imperial and Coachella Valleys. These two valleys are part of one large basin, facing each other across the Salton Sea. The canal to be constructed will have a capacity of 15,000 second-feet from the diversion and desilting works down to Syphon Drop. This is the point at which the Yuma project of Arizona will divert water from the main canal. From this point to Pilot Knob the capacity will be 13,000 second-feet.

At the latter point some water will be spilled back into the river through a power plant. From Pilot Knob the canal turns west along the border, with a capacity of 10,000 second-feet westerly to "Engineer Station 1907," at which point the canal for Coachella branches off.

This article fixes a top limit on cost to the district of $38,500,000. The district in the same article, however, undertakes to repay to the

United States expenditures in addition to that amount occasioned by damages caused by construction of the dam and the canal. The United States grants the use of public lands for construction of the canal and the district agrees to acquire other necessary rights of way.

8. *Assumption of operation and maintenance by district.*

Article 8 provides for the assumption of operation and maintenance by the district on 60 days' notice from the Secretary of the completion of construction of the dam and main canal, or any major unit thereof. However, the United States reserves the right to resume operation and maintenance of Imperial Dam at any time, and operation and maintenance thereof by the district are described as being part of the obligation of the district to transport and deliver water to public and Indian lands. Provision is made for relief to the district from operation and maintenance expenses in the event the United States does not complete the works.

9. *Keeping structures in repair.*

Article 9 prohibits the district from making any substantial changes in works constructed by the United States without the Secretary's consent, but requires it to make all repairs and replacements deemed necessary by the Secretary. In default thereof the United States may make repairs and charge the district the cost, plus 15 per cent.

10. *Agreement by district to pay for works constructed by United States.*

Article 10, which states the district's obligation to pay, is divided into seven subsections.

(*a*) The district agrees to pay the United States the actual cost of all works constructed by the Government, not to exceed $38,500,000, unless Congress shall fail to make necessary appropriations, and the works are not completed. In the latter event the district is permitted to elect whether or not to utilize the works under the contract, and provision is made for adjustment of the cost of the partially completed works on account of increased cost of completion to the district.

(*b*) The district is obligated to pay the United States the full contract amount, regardless of the default of any tract or landowner in the district in payment of assessments to the district, and the district agrees to levy and collect appropriate assessments to make up for the default or delinquency.

(*c*) The district will be divided into units by its board of directors for administrative and financial purposes. This division, however,

does not affect the obligation of the district, as an entity, to the United States.

(*d*) Provision is made for allocation of costs and benefits among the various units of the district by the board of directors. This article contemplates different rates of assessment as between the various units, depending upon the character of land embraced within each and the cost of the works serving each of them. These units bear somewhat the relationship to the parent district that subsidiary corporations bear to a parent corporation, but the obligation to the United States is that of the parent organization.

(*e*) It is provided that if lands which are already within the Coachella County Water District are included within the Imperial Irrigation District also, the Coachella District, continuing as an entity, shall have the privilege, if authorized by law, to pay to the Imperial Irrigation District the amount of any assessments levied by the latter against lands within the former. In other words, the Coachella District, which is an existing corporation, is by this clause permitted to act somewhat in the nature of an equalizing board as to lands subject to the dual jurisdiction of the two districts. The Coachella board may choose to raise the money due the Imperial District in any way permitted by law to the Coachella District. The Coachella corporation has revenue-raising powers differing somewhat from Imperial. This provision was the result of compromise between the two districts.

(*f*) Provision is made for the contingency that all works contemplated by the contract will not be constructed. The district board, in such an event, is authorized to determine which lands are benefited by the works constructed and which are not, and only the lands benefited will be required to pay. It is provided that no land shall be regarded as benefited unless the works actually constructed are such that water could reasonably be obtained therefrom for such lands. This clause also is a compromise between the Imperial and Coachella districts, reached after considerable negotiation.

(*g*) The district in this contract reserves the right to refuse water to any lands which may be delinquent in the payment of their assessments.

11. *Changes in district boundaries.*

Article 11 requires the Secretary's consent to changes in boundaries of the district except addition of lands described in article 34, infra.

12. *Terms of payment.*

Article 12 outlines the repayment schedule to be met by the district. Beginning with the calendar year following notice of completion, the district is to commence the repayment in 40 annual installments, of the cost of the works constructed by the United States. (See art. 10–A). The first five installments are to each equal 1 per cent of the obligation, the next 10 installments 2 per cent, and the remainder 3 per cent each. Each installment is payable in equal semiannual amounts due on March 1 and September 1 of each year.

13. *Operation and maintenance costs.*

Article 13 provides for the sharing of other agencies in operation and maintenance costs. The contract contemplates the possible use of these works by other agencies as well as by the district. (See arts. 14, 21.) Article 13 accordingly provides that such agencies shall contribute to the cost of operation and maintenance in an amount to be determined by the Secretary, but not less than the proportion of the capacity provided for them. These contributions are to be paid in advance to the district by such agencies on or before January 1 of each year, subject to subsequent adjustment.

14. *Power possibilities.*

Article 14, relating to power possibilities, was the subject of difficult negotiation between Imperial district, the Coachella district, and the United States. The United States reserves power possibilities to be developed by water carried for the Yuma project down to Syphon Drop, which is the point at which the Yuma project will divert from the All-American Canal. (See art. 15.) The district is accorded the privilege of utilizing other power possibilities on the canal. They will be financed by the district independently and will not be constructed by the United States under the contract as drawn.

Note, in this connection, that article 21 provides for the use of the works by other parties and for their share in power development.

Net proceeds from power development are to be paid into the Colorado River Dam fund annually and credited to the district until the amounts from this and other sources equal the district's total obligation. Thereafter net power proceeds belong to the district. If power proceeds exceed the annual installment, the excess is to be credited on the succeeding installment. The method of determining power proceeds is described in article 32.

15. *Diversion and delivery of water for Yuma project.*

Article 15, with the succeeding article, is concerned with the District's relations to the Yuma project in Arizona. That project is now watered from Laguna Dam by means of a canal which follows the California side of the river down to Syphon Drop and is syphoned under the river at that point. The Imperial contract contemplates the erection of a new diversion dam above Laguna Dam and the building of a new canal, from which Yuma will divert in lieu of diverting from the Laguna Dam. Accordingly, article 15 obligates the Imperial district to transport 2,000 second-feet of water from the Yuma project to Syphon Drop for use within that project, whose limits are defined in this article. The Yuma project is accorded the right to develop power at Syphon Drop. The increased height of the new canal will afford the Yuma project an increased power head as compared with its present system. The district agrees to transport water for Yuma project in excess of the latter's requirements for irrigation or potable purposes only when such excess water is not required by the district for the same purposes. The entire diversion, transportation and delivery of water for Yuma is to be without charge to the United States or to the project as to capital investment in the new facilities, except the structures required for delivery from the canal.

16. *Contract of October 23, 1918.*

Article 16 relates to the existing contract between the United States and the Imperial Irrigation District dated October 23, 1918. That contract gave the Imperial Irrigation District the option to connect its canal system with Laguna Dam in consideration for certain contributions toward the cost of that dam. The option has never been exercised, but the installments have been regularly paid. In the present contract, Article 16 requires the district to complete these payments as well as carry out the other provisions of article 19 of the 1918 contract, but the balance of the 1918 contract is terminated. In consideration for this termination, the district undertakes to furnish the Yuma project from power developed at Pilot Knob, not to exceed 4,000 horsepower, for use in project operations, at cost plus 10 per cent. The district is not obligated to furnish this power, however, except at times when all power feasible of development by Yuma at Syphon Drop or within 40 miles of the City of Yuma is being used for project operations.

17. *Delivery of water by the United States.*

Article 17 carries the uniform water allocation clause which appears in the Metropolitan Water District contract and which resulted from the seven-party agreement of August 18, 1931. As it has been discussed in connection with the Metropolitan contract, the analysis will not be repeated here.

The Imperial Irrigation District contract includes a clause not appearing in the Metropolitan Water District's contract, i. e., a proviso that the district may divert water in excess of its apportionment when physically available not inconsistent with the provisions of this article. As it is the last American user downstream, its excess diversions will not interfere with allocations to others.

The article concludes with the stipulation that no water shall be diverted, transported, or carried for any other party except by written consent of the Secretary, except as provided in article 21. Article 21 provides for carriage of water for holders of other contracts with the United States.

18. *Measurement of water.*

Article 18 provides for measurement of the water received by the district at points on the canal to be designated by the Secretary.

19. *Reports.*

Article 19 requires the district to submit periodical reports of water diverted.

20. *Refusal of water in case of default.*

Article 20 reserves to the United States the right to refuse to deliver water on 12 months' default in payment by the district, or to reduce deliveries in proportion to the default. Nevertheless the district remains obligated to carry water for the Yuma project and other agencies with which the United States may contract. Further, the United States reserves the right to assume control and operation of any works for so long a period as the Secretary may deem necessary if the district does not carry out the terms of the contract. (See also art. 8.) The district must reimburse the Government's actual costs plus 15 per cent in such an event. It is stipulated that these penalty provisions do not relieve the district of its obligations to pay in any event all installments and penalties provided in the contract.

21. *Use of works by the United States and others.*

Article 21 reserves to the United States the right to contract with other agencies for delivery to them of water through works constructed for the district and to increase the capacity of the works before transfer to the district for such purpose. However, it is stipulated that such agencies shall not be entitled to participate in power development except at points where and to the extent that water diverted or carried for them contributes to the development of power. In other words, parties taking delivery inland will not be entitled under this clause to power developed at Pilot Knob by water spilled back into the river. Nor will parties taking off from one of the two main branches of the canal be entitled to participate in power development on the other branch, or in development below their own diversion point. In other words, each of such agencies would be placed in the same position as though its contribution had resulted in the building for it of an individual canal carrying its own water. This article requires such agencies to assume such proportion of the total cost of the works, including the cost of Laguna Dam, as the Secretary may determine to be equitable, but not less than the proportion borne by the capacity provided for such agencies to the total capacity of the works. However, a proviso is made here as to works above Syphon Drop. Inasmuch as Yuma contributes nothing to the capital cost of these works, the proportion of cost to other agencies is necessarily raised because of Yuma's exemption. The article adds that construction costs chargeable to the district shall not be increased by reason of additional capacity being provided for other agencies (other than Yuma) and any agency contracting must be required to reimburse the district proportionately for its payments for the right to use Laguna Dam.

22. *Title.*

Article 22 reserves title in all works to the United States, but provides that the Secretary may, in his discretion, when repayment has been completed, transfer title to the canal and works below Syphon Drop to the agencies having a beneficial interest therein.

23. *Assessments.*

Article 23 provides for assessments against two classes of public lands:

(*a*) Unentered lands (and entered lands for which no final certificate has been issued) described in Exhibit B (which is an enumeration by rectangular surveys of certain areas).

(*b*) Unentered public lands (and entered lands for which no final certificate has been issued) not described in Exhibit B, but taken into the district with the Secretary's consent.

Segregation as between these two classes of lands was required by differing statutory provisions. The latter class is made subject to assessment upon future consent of the Secretary at the district's request, whereas the first class is designated by the contract as being subject to assessment.

It is provided that both classes shall be subject to entry within a reasonable time after water is available for delivery.

24. *Rules and regulations.*

Article 24 subjects the contract to the Secretary's rules and regulations, but provides that the contractor shall have the right to be heard before any change in regulations.

25. *Inspection by the United States.*

Article 25 reserves the right of inspection of all works to the United States.

26. *Access to all books and records.*

Article 26 accords to either party the right of access to books and records of the other relating to matters covered by the contract.

27. *Disputes or disagreements.*

Article 27 provides machinery for arbitration in the event that the parties elect to arbitrate any particular dispute. The arrangement is comparable to that in article 35–B of the power contract with the City of Los Angeles and the Edison Company.

28. *Interest and penalties.*

Article 28 provides that the obligation of the district shall not bear interest except on installments unpaid when due. These are subject to a penalty of one-half of 1 per cent per month.

29. *Agreements subject to Colorado River compact.*

Article 29 quotes the provision of the project act subjecting the contract to the Colorado River compact.

30. *Application of reclamation law.*

Article 30 subjects the contract to the operation of the reclamation law except as provided by the project act.

31. *Contract to be authorized by election and confirmed by court.*

Article 31 requires the contract to be authorized by the qualified electors of the district and to be confirmed by judicial proceedings. This article stipulates that the United States shall not be bound until a confirmatory judgment becomes final.

32. *Method of determining net power proceeds.*

Article 32 defines net power proceeds, which will be paid into the Colorado Dam fund as the result of power development on the canal as provided in article 14. Certain costs are to be deducted before arriving at net proceeds, including amortization, interest, repairs, replacements, operation, maintenance, etc.

33. *Contingent upon appropriations.*

Article 33 provides that the contract is contingent upon appropriations by Congress, but that no liability shall attach to the United States because of insufficiency of appropriations or insufficiency of money in the Colorado River Dam fund. It is provided that if three years elapse after the contract becomes effective before appropriations become available, the district may cancel the contract on 60 days' written notice, preceded by a vote of the electors of the district and such formalities as would be required for entering into a contract with the United States.

34. *Inclusion of lands.*

Article 34 represents a compromise of the difficult questions of boundary extensions arising between the Imperial Irrigation District and the Coachella Valley County Water District, and between the Imperial Irrigation District and other areas which may be included in that district.

The article is in eight subsections:

Section (*a*) defines "area to be included" in terms of a map attached as Exhibit A.

Section (*b*) obligates the district to include within its boundaries all public lands lying south of a township line which roughly divides Imperial from Coachella Valley. This undertaking is unconditional and relates to public lands within Imperial Valley.

Section (*c*) obligates the district to change its boundaries so as to include private lands south of the same line, if petitions are filed before January 1, 1940.

Section (*d*) relates to lands north of the township line, i. e., within Coachella Valley. Most of this area lies also within the Coachella Valley County Water District. The district promises to include these lands if petitions are presented within 30 days after a confirmatory judgment has become final, provided that such petitions must be sufficient to lawfully include not less than 90 per cent of such lands, exclusive of the Dos Palmas area and exclusive of Indian and public lands of the United States. Under the California law petitions on behalf of 51 per cent of this 90 per cent of the acreage are required to make the 90 per cent eligible for inclusion. Further, the district agrees within a reasonable time after such petitions are filed to include public lands north of the same boundary line.

Section (*e*) states the conditions upon which all lands are to be included within the district. Five such conditions are stated, as follows:

Condition No. 1 makes definitions of terms used.

Condition No. 2 provides for division of the lands into units. Imperial unit is to include lands within the district as of July 1, 1931, and other lands that may be added to that unit by the board.

Condition No. 3 provides for a "unit obligation," running from the unit to the district, to pay its proportion of the total sum paid by the district to the United States on account of the Laguna Dam contract. The proportion is to be fixed by ratio of acreage between the unit and the district, as to payments made by the district before inclusion of the new unit. The new unit is allowed to discharge its share for the preexisting debt in ten annual installments, commencing with notice of completion of the works.

Condition No. 4 states the unit's obligation to pay for its distributing system. Each unit is obligated to bear the total capital cost of the distributing system within that unit, but the system is to remain the property of the district. Construction is to be effected by the district.

Condition No. 5 provides for pumping costs.

Condition No. 6 provides that unit obligations as stated in the preceding five conditions, unless otherwise collected from the respective units, shall be a part of but in addition to annual assess-

ments levied on said lands for other district purposes. The additional unit obligation is to be met by an assessment levied on the lands within the unit on an ad valorem or other basis, as may be provided by law. But, for protection of the Government security, it is provided that assessments within any unit for district purposes shall be limited, until water is available in the canal for use within the unit, to such amounts as are needed for expenditures made on the All-American Canal or for the benefit of the unit.

Section (*f*) provides for discretionary addition of lands after the confirmatory judgment has become final, and after the 30-day period provided in favor of the Coachella area has run, and reserves to the district the discretion to require as a condition precedent the payment of assessments which would have been paid if the lands had been included within the district at the expiration of the 30-day period.

Section (*g*) provides for the termination of any obligation to include lands in Coachella Valley if petitions are not filed within the period held open, i. e., 30 days after a decree of judgment has become final. In that event it is provided that works will not be constructed to serve that area.

Section (*h*) reserves the right to any party to appear before the board and protest against the inclusion of any particular tract or tracts under the conditions imposed by the board of directors of the district and preserves the power of the board to hear and determine any such objections or protests. In other words, all rights to due process now provided by the California statutes are maintained intact. But it is provided that if in the opinion of the Secretary the board's determination impairs the interests or security of the United States, the United States shall be under no obligation to proceed further under the contract.

35. *Priority of claims of the United States.*

Article 35 carries a clause uniform in all contracts made under the Boulder Canyon project act, stipulating that claims of the United States shall have priority over all others, secured or unsecured.

36. *Section 3737, Revised Statutes.*

Article 36 reserves all remedies to the United States available by the cited statute. This statutory provision relates particularly to attempted transfers of interest in a Government contract.

37. *Remedies not exclusive.*

Article 37 reserves all other remedies available to the United States, and provides that a waiver of a breach of any provision of the contract shall not be deemed a waiver of any other provision or of a subsequent breach of that provision.

38. *Interest in contract not transferable.*

Article 38 prohibits transfers of interest by the district and subjects the contract to cancellation in the event of such transfer.

39. *Member of Congress clause.*

Article 39 carries the standard prohibition against benefits to Members of Congress.

(c) THE PROPOSED CONTRACT WITH SAN DIEGO

The proposed contract between the United States and San Diego parallels closely the contract with the Metropolitan Water District of Southern California. It is planned that San Diego will later contribute to the cost of the All-American Canal, and make a separate contract for that purpose. The instant agreement is a water-delivery contract only. Eventually San Diego may be served by a new corporation organized along the general line of the Metropolitan Water District. The city and county were parties to the seven-party water agreement of August 18, 1931, being at that time the only entities capable of acting as trustees for this area. A contract has been approved as to form, running in favor of the city. In the event of the formation of a "San Diego-Metropolitan Water District" or similar organization, suitable substitution or subcontract may be made.

An outline of the proposed contract follows:

1. *Parties.*

The proposed parties have been outlined in the preceding paragraph.

2–6. *Explanatory recitals.*

Articles 2 to 6 recite the authorization of the project act for the construction of Hoover Dam, the proposed contract between the United States and the Imperial Irrigation District for the construction of the All-American Canal, with a reservation in such contract of the right to increase the capacity of the works for the delivery of water to other parties, and the desire of the city and the United States to enter into a contract for the delivery of water to San Diego, and the plan of the

city and the United States to hereafter enter into a contract for the utilization of the All-American Canal for the delivery of such water

7. *Delivery of water by the United States.*

Article 7 contains the uniform allocation clause appearing in the Metropolitan and Imperial contracts. San Diego's allocation appears in section 5 of that article, being a fifth priority in the amount of 112,000 acre-feet, shared with an equal priority in behalf of the Metropolitan Water District, amounting to 550,000 acre-feet. In addition San Diego reserves an accumulative storage provision under section 9 in the amount of 250,000 acre-feet, subject to regulation by the United States of conditions of accumulation, retention, release, and withdrawal. Section 11 stipulates that the San Diego allocations which are made "to the City of San Diego and/or to the County of San Diego" are in the alternative and do not amount to a separate apportionment to each.

The balance of the article is substantially like the allocation article in the Metropolitan contract. The contract is for permanent service but is subject to the condition that in the event that water is not taken or diverted by the State within ten years after completion of Hoover Dam the contract may be terminated on written order of the Secretary, after hearing.

8. *Receipt of water by the city.*

The city agrees to receive the water delivered to it by the United States and to perform all acts required by law or custom in order to maintain its control over such water and proper diversion thereof.

9. *Measurement of water.*

Water is to be measured by means of devices approved by the Secretary.

10. *Record of water delivered.*

The city is required to make written monthly reports of the quantities diverted for it.

11. *Charge for delivery of water.*

A charge of 25 cents per acre-foot will be made for water diverted to the city during the Hoover Dam cost repayment period. This article corresponds with the charge in the Metropolitan Water District contract.

12. *Monthly payments and penalties.*

The city is required to pay monthly for water "delivered to it hereunder, or diverted by it from the Colorado River." A penalty of 1 per cent per month will be levied against charges not paid when due. It will be noted that in both this and the Metropolitan Water District contract no minimum annual payment is stipulated and the charge is to be collected only for water taken, inasmuch as the United States is authorized to charge only for water delivered or diverted, and the contract provides in article 7 only for deliveries "for use."

13. *Refusal of water in case of default.*

The United States reserves the right to discontinue diversions in the event of default for 12 months in any payment.

14. *Inspection by the United States.*

The right of inspection of all works, and all books and records relating to diversion and distribution, is reserved by the Government.

15. *Disputes or disagreements.*

A method is provided for use in the event that the parties elect to arbitrate. This accords with article 35–A of the power lease to the City of Los Angeles and the Southern California Edison Co., and with similar provisions in the Metropolitan and Imperial contracts.

16. *Rules and regulations.*

The clause stating the contract to be under the Secretary's regulation, subject to the right of the city to be heard, is identical with a similarly captioned clause in the Metropolitan contract.

17. *Agreement subject to Colorado River compact.*

Article 17 contains a stipulation required by section 13–*a* of the Boulder Canyon project act reciting that the contract is subject to the Colorado River compact.

18. *Priority of claims of the United States.*

Article 18 quotes the project act's stipulation that claims of the United States have priority over all others, secured or unsecured.

19. *Contingent upon appropriations.*

The contract is made subject to appropriations by Congress and adequacy of funds in the Colorado River Dam fund.

20. *Rights reserved under section 3737 R. S.*

This section also is identical with the Metropolitan Water District clause similarly captioned.

The remaining three articles—21. *Remedies under contract not exclusive;* 22. *Interest in contract not transferable,* and 23. *Member of Congress clause,* are identical with the final three articles of the Metropolitan Water District contract.

(D) PALO VERDE IRRIGATION DISTRICT

A contract has been approved as to form between the United States and the Palo Verde Irrigation District, and awaits execution by the latter. That district is a present user of Colorado River water. The proposed water contract would bring these water uses within the structure of the Federal contracts which embrace all other parties to the seven-party water agreement of August 18, 1931.

An outline of the contract follows:

1. *Parties.*

The proposed parties are the United States and the Palo Verde Irrigation District.

2. *Explanatory recitals.*

Articles 2 to 5 recite the construction by the United States of Hoover Dam and the desire of the parties to enter into a contract for delivery of water to be stored thereby.

6. *Delivery of water by the United States.*

This article contains the uniform allocation clause appearing in the Metropolitan and Imperial contracts, plus an additional reservation on behalf of the district. The district retains the right to adjudicate its water rights at any time and the Secretary reserves the right to contract with the district hereafter in accordance with such adjudication. This reservation was prompted by the restriction on Palo Verde's use stated in the uniform allocation. Such use is thereby restricted to lands within the district. A certain part of the water allocated has already been put to use under conditions which may entitle the district to sell such water for use elsewhere, and in the event that an adjudication so determines, a subsequent contract may be entered into. The balance of the article provides that the contract is subject to the Colorado River compact, and is a contract for per-

manent service, but the United States disclaims liability for failure to supply water.

7. *Receipt of water by district;* 8, *Measurement of water;* 9, *Record of water diverted.*

These three articles are identical with the similar provisions in the Metropolitan contract, outlined supra.

10. *Charge for delivery of water.*

No charge will be made for the delivery of water under this contract. But this stipulation, it will be noted, applies only to diversions under the present contract, and not to diversions which may be made pursuant to a new adjudication; i. e., if used out of the watershed.

11, *Inspection by the United States;* 12, *Disputes and disagreements;* 13, *Rules and regulations;* 14, *Agreement subject to Colorado River compact;* 15, *Priority of claims of the United States;* 16, *Contingent upon appropriations,* 17,*Rights reserved under section 3737, Revised Statutes;* 18, *Remedies under contract not exclusive;* 19, *Ingerest in contract not transferable;* 20, *Member of Congress clause.*

All of these articles are identical with the articles similarly captioned in the Metropolitan Water District contract.

(D) THE PARKER DAM CONTRACT

On January 27, 1933, Secretary Wilbur approved as to form a proposed contract between the United States and the Metropolitan Water District of Southern California providing for the cooperative construction and operation of Parker Dam. The dam would be located on the Colorado River just below the mouth of the Bill Williams River and would be used by the district and the United States jointly although financed entirely by the district. The principal provisions of the contract are as follows:

1. *Parties.*

The proposed parties are the United States and the Metropolitan Water District of Southern California.

2–9. *Explanatory recitals.*

These recitals state the background of the present proposal and the statutory authority of the Secretary for proceeding.

Article 2 recites the present contractual relations between the parties—a power contract, and a water contract calling for the

delivery of water immediately above the district's point of diversion at or in the vicinity of the proposed Parker Dam. The power contract is limited to use for the pumping of water into and in the district's aqueduct.

Article 3 recites that the point of delivery and the proposed dam site are approximately 10 miles above the boundaries of the Colorado River Indian Reservation, a reservation upon which there are now being irrigated certain areas, and that water has been reserved by act of Congress (36 Stat. 273) for reclamation of additional areas within the reservation. It is further recited that such reclamation will require diversions from the river by a dam or by pumping or both and will require drainage by means of pumping for all of which purposes electrical energy is needed.

Article 4 recites the existence of additional areas in the Gila River susceptible of irrigation and requiring pumping. An investigation of feasibility of reclamation of these areas is now under way pursuant to section 15 of the Boulder Canyon project act.

Article 5 recites that the reclamation of these Indian and public lands will be rendered more feasible by availability of stored water and electrical energy at Parker Dam and the control of floods of the Colorado's tributaries below Hoover Dam.

Article 6 recites the Secretary's authorization by the act of April 21, 1924 (33 Stat. 224) to build the proposed dam for the reclamation of lands on the Yuma and Colorado River Indian Reservations, and that such authority has been reserved in the Arizona enabling act. (36 Stat. 575.)

Article 7 recites that the district is engaged in the building of an aqueduct and that the proposed dam will provide storage, desilt the water, reduce pump lift, and develop incidental energy and that the district is willing to pay to the United States the entire capital cost of the construction, and is further willing that one-half of the power privilege be reserved to the United States for the irrigation and drainage of lands within the Indian Reservation and the Gila or Parker-Gila project without contribution by the United States to the capital cost of the dam.

Article 8 recites the Secretary's authority under the act of March 4, 1921 (41 Stat. 1367, 1404) to receive money from the district and

to construct the proposed works as though that money had been specifically appropriated by act of Congress.

Article 9 recites that funds are not available from other sources for the construction of the dam, that its construction will mutually benefit the two parties, and that its cost will be materially less if the dam is built during the completion of Hoover Dam. In other words, the construction work will be freed of flood dangers during the filling of the reservoir at Hoover Dam.

10. *Construction by the United States.*

In Article 10 the United States undertakes, with funds to be advanced by the district, to build a dam creating a storage reservoir with a maximum water surface elevation of approximately 450 feet above sea level, i. e., raising the river about 70 feet. The location is designated on a map attached designated as Exhibit A. The location is just below the mouth of the Bill Williams River and several miles above what is commonly known as the lower Parker site. The United States also undertakes to build outlet works, pressure tunnels, penstocks, etc., and navigation facilities as required by the Secretary. Each party is to contribute the cost of buildings required by it alone, i. e., power plant structures. The dam will be so built that outlet works for canal connections can be added. The power plant structure will be so arranged that one-half of the total installed capacity may be located on either side of the river. The United States may proceed directly under force account or by construction contract.

11. *Funds to be provided by the district.*

The district promises to advance not to exceed $13,000,000 for the purposes of (*a*) preparation of plans, (*b*) construction of the dam and acquisition of rights of way and the district's proportionate share of power plant buildings and generating equipment, and (*c*) overhead and general expenses of the United States.

The funds will be advanced by payment to the Secretary or his fiscal agent in advance of expenditure by the United States. Provision is made for submission of estimates by the Secretary in advance. The district agrees to hold the United States harmless from all claims. If funds provided by the District are insufficient, the United States will stop work until additional funds are provided. Any construction

contract will recite a disclaimer by the United States of liability for damages on account of such failure of funds. The United States may be relieved of any obligation to complete the works if the District fails for twelve consecutive months to furnish funds in accordance with the Secretary's estimates. The United States disclaims any obligation on the part of Congress to appropriate money or of the United States to furnish any part of the total cost of the dam or any appurtenant works.

12. *No obligation by the United States to pay for works constructed.*

Article 12 specifically disclaims any obligation on the part of the Government to repay or otherwise contribute toward the cost of any works built with funds advanced by the district.

13. *Preparation of plans and specifications.*

Articles 13 provides for cooperation of the United States and the district in the preparation of plans and the approval thereof by the district's officers.

14. *Duration of contract.*

Article 14 states that it is planned that the dam shall be constructed coincidentally with construction of Hoover Dam and filling of its reservoir and that the contract shall terminate on December 31, 1945, unless sufficient funds for completion have been advanced by the district prior to that date. In such event all rights of the district terminate and the uncompleted works vest in the United States. The district may give notice to the Secretary at any time that it is ready to proceed and the United States will submit its first estimate 30 days thereafter and proceed thereafter with reasonable diligence.

15. *Power and other privileges.*

This article is divided into three major divisions set off by Roman numerals. The first states certain joint objectives; the second states rights reserved by the United States; and the third states rights reserved by the district.

Section I recites that the interests of both parties require that the water surface be maintained as nearly as possible at a level of 450 feet above sea level.

Section II reserves to the United States four privileges:

(*a*) The right to control all water passing the dam, provided that the level of 450 feet shall not be arbitrarily reduced, but may be

temporarily reduced to 440 feet, and shall not be reduced below that point except in cases of emergency affecting the safety of the dam and works.

(*b*) The right to one-half the power privilege for use in irrigation and drainage of lands in Arizona and for other purposes incidental to the Colorado River Indian Reservation and the Gila or Parker-Gila project The United States reserves the right also to use such portion of the balance of the power privilege as may not be used by the district for the time being.

(*c*) The right to connect with the district's transmission system and to utilize any power transmission capacity on the district's lines in excess of the district's requirements, for the transmission of power from Hoover Dam to Parker Dam for use within the Indian reservation and the Gila or Parker-Gila project. The district will transmit at cost for the United States.

(*d*) The right to connect with Parker Dam and its reservoir by means of a canal for irrigation of lands in Arizona. The topograpy is such that it is not likely that such a canal will be built, however,

Section III recites the privileges reserved by the district:

(*a*) The right to one-half the power privilege on the same terms as the reservation to the United States.

(*b*) The right to divert water from the dam and reservoir by means of an aqueduct and to take thereby such quantities as may be consistent with the project act, the Colorado River compact and the contracts now in force between the district and the United States.

16. *Installation of machinery.*

The district will install, own, and operate its own generating equipment and shall not be liable for the cost of the Government's equipment.

17. *Operation and maintenance of reservoir, dam, and outlet works.*

The United States will operate and maintain the reservoir, dam, and outlet works, to, but not including shut-off valves. It reserves the right to direct the control of all water passing the dam for any and all purposes. This control, however, shall not impair the power and water contracts now in force between the parties. So long as the United States does not use the reservoir, the district will advance the cost of operation and maintenance monthly on estimates submitted by the Government. When the United States commences use of

the reservoir, the cost of operation and maintenance will be prorated upon the basis of a comparative use of water by each party.

18. *Operation and maintenance of power plant and power plant buildings.*

Each party will operate and maintain at its own cost the generating equipment and power plant buildings used by it.

19. *Title.*

Title to the dam and all other structures erected by the United States, whether utilized by it or by the district, shall remain in the United States.

20. *United States to be held harmless.*

The district agrees to save the United States harmless from all claims arising out of construction and operation of the dam and to pay all damages resulting from flooding of lands, including a small desert area within the Chimehuevi Indian Reservation.

21. *Access to work and to books and records.*

Each party will have access to the plans, books, and records of the other with reference to the dam.

22. *Existing contracts between the United States and the district not affected.*

The present power and water contracts between the parties remain unaltered by this agreement.

23. *Transfer of interest in contract.*

No voluntary transfer of the contract or of any interest therein may be made without the Secretary's approval.

24. *Rules and regulations.*

The contract will be subject to the Secretary's regulations, provided that the district's rights shall not be impaired thereby and that opportunity for hearing shall be afforded the district by the Secretary.

25. *Agreement subject to Colorado River compact.*

Article 25 contains a stipulation required by the project act in section 13 (*a*) to the effect that the contract is subject to the Colorado River compact.

26. *Disputes and disagreements.*

Article 26 provides procedure in the event that the parties agree to arbitrate. This accords with article 35 (*a*) of the Hoover Dam power lease.

27. *Member of Congress clause.*

Article 27 contains the usual stipulation relating to benefits to members of Congress.

3. THE PROPOSED ARIZONA WATER CONTRACT

Secretary Wilbur on February 7, 1933, promulgated regulations in the nature of an offer to Arizona of a water delivery contract. Under the terms of the regulations the offer remains open only so long as Arizona does not interfere with diversions or diversion works of other holders of water contracts with the United States.

The terms of the proposed contract, stated in 22 articles, are as follows:

1. *Parties.*

The proposed parties are the United States and the State. It is contemplated, however, under article 11, that at some later time subordinate contracts will be entered into between the United States and actual water users. The present contract will be in the nature of a general specification of terms to cover all deliveries.

2–9. *Explanatory recitals.*

Article 2 recites the construction by the Department at Black Canyon of a dam creating a reservoir capacity of 30,500,000 acre-feet.

Article 3 recites the authorization of the project act for use of this dam and reservoir for river regulation, improvement of navigation and flood control; second, for irrigation and domestic use, and satisfaction of perfected rights, and third, for power.

Article 4 recites the authorization of the act for the making of water delivery contracts.

Article 5 recites the previous promulgation of regulations for delivery of water in California and the desire of the present parties to likewise contract for storage of water for use in Arizona and to assure the uninterrupted performance of all such contracts.

Article 6 recites that water has been reserved and appropriated for land within the Colorado River Indian Reservation in Arizona unaf-

fected by the Colorado River compact (Art. VII of which exempts obligations of the United States to Indian tribes).

Article 7 recites the desire of the parties to avoid claims by foreign water users to water stored by Hoover Dam to the detriment of the Arizona project, and to provide for storage of waters for use in Arizona without prejudice to the right of the parties to hereafter contract as to additional water.

Article 8 recites the plans for construction of Imperial Dam and Parker Dam, the value of these works in connection with the proposed Arizona projects, and the purpose of this contract to insure that these works shall not be interfered with.

Article 9 ends the explanatory recitals and introduces the covenants.

10. *Delivery of water by the United States.*

Article 10 states the promise of the United States to deliver water. The United States undertakes to deliver annually so much water as may be necessary to enable the beneficial consumptive use in Arizona of not to exceed 2,800,000 acre-feet, effected by all diversions from the Colorado River and its tributaries below Lee Ferry other than the Gila. This undertaking is parallel to the promise in the California water contracts; i. e., to deliver from the reservoir whatever water may be required to make up a total whose other components are uses effected by the contractor from sources other than discharges from Hoover Dam. It will be noted that the Gila River is specifically excepted. Uses on the Gila River are not affected or limited by this contract, nor would such uses be deducted from the total to be furnished Arizona.

This promise to deliver water will be subject to five stipulations:

(*a*) The contract is without prejudice to the claims of Arizona and States of the upper basin as to respective rights to waters of the Colorado, and relates only to waters physically available for delivery in the lower basin. In other words, the contract deals entirely with waters to be discharged from Hoover Dam, and is a contract made pursuant to section 5 of the Boulder Canyon project act for delivery of stored water. It does not purport to be an agreement between Arizona and the upper basin States.

(*b*) The United States does not undertake to deliver water above Hoover Dam, but it is provided that to the extent that diversions in Arizona at points above Hoover Dam diminish the river to the reservoir, deliveries to Arizona from the reservoir will be likewise curtailed.

Paragraph (*c*) recites the controversy between Arizona and other contractors as to the quantity of water available to each under Article III–A and Article III–B of the Colorado River compact, what part is surplus water, and what part is affected by the limitations on California's uses stated in section 4 (*a*) of the Boulder Canyon project act. Accordingly, the United States, while it undertakes to supply the quantities of water stated by the contract, specifically provides that the contract is without prejudice to relative claims of priorities as between Arizona and other water contractors, and that this contract shall not impair any agreement previously authorized by the Secretary's regulations (i. e., California contracts).

Paragraph (*d*) provides that the contract is without prejudice to the right of the United States to make further disposition of any waters available in the lower basin, not covered by this or previous contracts; and that the contract is without prejudice to the respective claims of the various States and of Mexico to such additional water.

Paragraph (*e*), as in the case of the California contracts, provides that the water shall be delivered continuously, so far as reasonable diligence will permit, to the extent that such water is beneficially used for irrigation and domestic purposes. The customary disclaimer of liability for failure of supply, appearing in all the California contracts, is inserted here.

11. *Subordinate contracts authorized.*

Article 11 provides that deliveries of water under the contract will be made by the United States to lands within any Indian Reservation and to any individual, irrigation district, corporation or political subdivision of Arizona which may qualify under the reclamation law or other Federal statute. It is provided that contracts with such water users may be made by the Secretary in his discretion and that deliveries made under such subordinate contracts shall be deemed made in partial discharge of the obligations of this contract.

12. *Points of diversion; Measurement of water.*

Article 12 provides that deliveries will be measured at the points of diversion by measuring devices approved by the Secretary subject to Federal inspection and provides for estimates by the Secretary of deliveries at points where such devices are not maintained.

13. *Records of water deliveries.*

Article 13 obligates the State to render monthly reports to the United States of quantities of water diverted.

14. *No charges for delivery of water.*

Article 14 provides that no charge shall be made for the delivery or storage of water for irrigation or potable purposes. This is the same provision appearing in the All-American Canal contract and the proposed Palo Verde contract. It will be recalled that the Boulder Canyon project act, while specifically exempting Imperial and Coachella lands from payment for the storage of water, made no such provision in favor of Arizona. Nevertheless, this contract proposes to voluntarily waive any charge for the service of storing water for use in Arizona. In other words, Arizona makes no contribution towards the cost of Hoover Dam.

15. *No Arizona diversions to be made except pursuant hereto; Diversions in other States.*

Article 15 states the promise running from Arizona which is the consideration for execution and performance by the United States of this contract. The article recites that it is the object of the contract to assure all contractors with the United States the quiet enjoyment of their respective water contracts. Three stipulations follow:

(*a*) Arizona agrees that it will grant no permits for use of waters of the Colorado River and its tributaries (other than the Gila), except subject to the terms of this contract.

(*b*) Arizona agrees that the State and its permittees will not interfere by litigation or otherwise with deliveries of water to any other Government contractor under the regulations of April 23, 1930, and September 28, 1931 (i. e., California contracts), nor with the construction of diversion works—unless and until such contractor interferes by litigation or otherwise with the performance of Arizona's contract. However, in the event of interference by a California contractor with enjoyment by Arizona of its contract, the State may

at its election either rely on its Government contract or assert all rights which the State or any water user would have had against the litigant if this contract had not been made.

(*c*) Breach by the State of any provisions of this article will entitle the United States at its option to cancel the contract and any subordinate contracts made under article 11.

16. *Duration of contract.*

The contract is to be for permanent service subject to the conditions stated in article 15.

17. *Disputes and disagreements.*

Article 17 contains substantially the arbitration clause of article 35–*a* of the power contracts; i. e., it provides machinery to be used by the State and the United States in event they elect to arbitrate a dispute.

18. *Rules and regulations.*

Article 18 provides for adherence to the Secretary's regulations but provides that they shall be promulgated or modified only after notice to the State and opportunity to be heard.

19. *Agreement subject to Colorado River compact.*

Article 19 incorporates the clause required by the project act to be included in all contracts; i. e., that the contract is subject to the Colorado River compact. But the article further provides that the contract is without prejudice to the respective contentions of the State of Arizona and the parties to that compact, as to interpretation thereof.

20. *Effective date of contract.*

The contract is to be made effective upon ratification by the Legislature of Arizona, within two years of the date of execution.

21. *Interest in contract not transferable.*

Article 21 stipulates against transfer of any interest in the contract by either party without the written consent of the other parties.

22. *Member of Congress clause.*

Article 22 incorporates a disclaimer against benefits to Members of Congress, required by statute.

The regulations as promulgated state the full text of the contract outlined above, executed by Ray Lyman Wilbur, Secretary of the Interior.

APPENDIXES

I. THE HOOVER DAM POWER CONTRACTS

1. Regulations.
   Issued April 25, 1930. Printed as amended March 10, 1931, July 1, 1931, November 16, 1931.
2. Lease of power privilege—United States, City of Los Angeles, and Southern California Edison Co. (Ltd.).
   Dated April 26, 1930. Printed as amended May 28, 1930, September 28, 1931.
3. Contract for electrical energy—United States and Metropolitan Water District of Southern California.
   Dated April 26, 1930. Printed as amended May 31, 1930.
4. Contract for electrical energy—United States and The Los Angeles Gas & Electric Corporation.
   Dated November 12, 1931.
5. Contract for electrical energy—United States and Southern Sierras Power Co.
   Dated November 5, 1931.
6. Contract for electrical energy—United States and City of Pasadena.
   Dated September 29, 1931.
7. Contract for electrical energy—United States and City of Glendale.
   Dated November 12, 1931.
8. Contract for electrical energy—United States and City of Burbank.
   Dated November 10, 1931.

[APPENDIX 1]

BOULDER CANYON PROJECT

GENERAL REGULATIONS: LEASES AND CONTRACTS FOR HOOVER DAM POWER

WASHINGTON, D. C.

April 25, 1930
Amended March 10, 1931, July 1, 1931
and November 16, 1931

BOULDER CANYON PROJECT

GENERAL REGULATIONS FOR LEASE OF POWER

I

The United States will, at its own cost, construct in the main stream of the Colorado River, at Black Canyon, a dam, designated as Hoover Dam, creating thereby at the date of completion a storage reservoir having a maximum water surface elevation at about twelve hundred twenty-two (1,222) feet above sea level (United States Geological Survey datum) of a capacity of about twenty-nine million five hundred thousand (29,500,000) acre-feet. The United States will also construct in connection therewith outlet works, pressure tunnels, penstocks, power-plant building, and furnish and install generating, transforming, and high-voltage switching equipment for the generation of the energy allocated to the various allottees, respectively. Title to Hoover Dam, reservoir, plant, and incidental works shall forever remain in the United States.

II

The United States will operate and maintain the dam, reservoir, pressure tunnels, penstocks to but not inclusive of the shut-off valves at the inlets to the turbine casings, and outlet works, and will have full control of all water passing the dam for any and all purposes. The dam and reservoir will be operated and used, first, for river regulation, improvement of navigation, and flood control; second, for irrigation and domestic uses and satisfaction of present perfected rights in pursuance of Article VIII of the Colorado River compact; and, third, for power.

III

The United States will lease to the City of Los Angeles, referred to herein as the city, for fifty (50) years from the date at which energy is ready for delivery to the city, as announced by the Secretary, such power-plant units and corresponding plant facilities and incidental structures as may be necessary to generate the energy allocated to it and energy for those allottees for whom the city is herein designated the generating agency, together with the right to generate such electrical energy.

The United States will lease to Southern California Edison Co. (Ltd.), referred to herein as the company, such power-plant units and corresponding plant facilities and incidental structures as may be necessary to generate the energy allocated to it and energy for those allottees for whom the company is herein designated the generating agency, together with the right to generate such electrical energy, for a period beginning with the date at which the first of such power-plant units is ready for operation and water is available therefor as announced by the Secretary, and ending at a time fifty (50) years from the date at which energy is ready for delivery to the city.

The machinery and equipment under lease to either lessee shall be operated and maintained by such lessee without interference from or

control by the other lessee, but subject nevertheless to the supervisory authority of the Secretary or his representative, under the terms of the lease.

Subject to conditions hereinafter stated, the designation of generating agencies shall be as follows:

Generation of energy allocated to and used by the States of Nevada and Arizona shall be effected by the city.

Generation of energy allocated to municipalities shall be effected by the city.

Generation of energy allocated to the district shall be effected by the city.

Generation of energy allocated to the companies shall be effected by Southern California Edison Co. (Ltd.).

The lessees and allottees may make other arrangements for generation, subject to the approval of the Secretary.

Disputes and disagreements between any allottee and the lessee generating energy for it, with respect to such generation, and/or the cost thereof, shall be determined by the Secretary unless otherwise specifically provided by contracts thereof with the Secretary.

All generation shall be effected at cost, except as provided in contracts with the United States.

IV

The respective portions of the power plant and appurtenant structures shall be operated and maintained by the city and the company, severally, under the supervision of a director appointed by the Secretary. The city and the company shall each be responsible for the operation and maintenance of that part of the power plant operated by it and shall bear the cost thereof. The United States will pay each lessee in the form of credits upon the account of such lessee for amounts due the United States under its contract, the cost incurred by it in generating energy for other allottees for whom it is the designated generating agency, and will require such other allottees to repay such cost to the United States. Except as to off-peak power the term "cost" as used with reference to generating energy for other allottees, shall include a proper proportionate allowance for amortization of the amounts for which the respective lessees are obligated to the United States on account of use of machinery and equipment and interest on the respective lessees' prepayments thereof; a proper proportionate part of any annuity set up in accordance with regulations of the Secretary, and any additional expenditures made by the respective lessees with the approval of the Secretary for the purpose of meeting the obligation of the lessees to make replacements; and a proper proportionate part of the actual outlay of the lessees for operating such machinery and equipment and keeping the same in repair, including reasonable overhead charges. The extent of the allowance for the several items and the system of accounting therefor shall be prescribed by the Secretary under uniform regulations to be promulgated by him in accordance with the Boulder Canyon project act. The United States will compensate each lessee for the generation by it of any secondary energy not taken by the district or the lessees in accordance with Article V hereof but disposed of by the United States, such compensation to cover the pro rata cost thereof as defined in this article (in proportion to the total kilowatt-hours

generated in that month by each lessee), during the time said secondary energy was generated. Such secondary energy will be disposed of by the United States subject only to the prior right thereto of the district and/or the lessees.

The director, among other powers, shall have authority to enforce rules and regulations promulgated by the Secretary in accordance with the Boulder Canyon project act, respecting operation and maintenance of the power plant and appurtenant works and structures.

Prior to the promulgation of any additional regulations, or the change or modification of regulations, the Secretary shall give any lessee and any allottee affected thereby, an opportunity to be heard.

V

The following allocation of energy is made (the percentages stated being percentages of the total firm energy available) subject, however, to the conditions hereinafter stated:

Of firm energy.

A. To the State of Nevada, for use in Nevada, not exceeding eighteen per centum (18%) of said total firm energy.

B. To the State of Arizona, for use in Arizona, not exceeding eighteen per centum (18%) of said total firm energy.

Should either of the States not take its full eighteen per centum (18%) allocation within a period of twenty (20) years hereof, the other may then contract for the energy not so taken up to four per centum (4%) of the total firm energy, provided that the combined amount used by the two States shall not, at any time, exceed thirty-six per centum (36%) of such total firm energy.

C. To the Metropolitan Water District of Southern California (hereinafter referred to as the district) so much energy as may be needed and used for pumping Colorado River water into and in its aqueduct for the use of such district within the following limits:

(1) Not exceeding thirty-six per centum (36%) of said total firm energy; plus

(2) All secondary energy developed at the Boulder Dam power plant as provided in these regulations; plus

(3) So much of the firm energy allocated to the States, the city and the company as may not be in use by them. Energy allocated to the States but not in use by them shall be released to the district by the two lessees equally (unless they agree upon a different ratio) as follows:

(*a*) If the district makes a firm contract with the Secretary for the balance of the lease period for part or all of such unused States energy (subject to the first right of the States thereto) such contract shall be made effective upon two years' written notice to the Secretary, and compensation to the lessees, respectively, for main transmission line property rendered idle;

(*b*) If the district does not so make a firm contract for such energy, then energy allocated to the States but not in use by them shall be released to the district upon not less than fifteen (15) months' written notice to the Secretary and at such compensation as the district and such lessees, respectively, may agree upon, to cover cost

and overhead of replacing energy which otherwise would have been received at the Pacific coast end of the main transmission lines by the lessees, respectively. Such cost shall include interest on and depreciation and operation and maintenance of the plant capacity while required for the generation of such substitute energy; and also appropriate allowance for interest on and maintenance and depreciation of plant capacity rendered idle because of cessation of generation of such substitute energy until such time as such plant capacity would otherwise have been installed by the lessees, respectively, for their own requirements. If the district and the respective lessees fail to agree on such compensation, such energy shall nevertheless be released to the district, and the disagreement shall be determined by arbitration or as may be provided in the respective contracts of the parties with the Secretary. Such determination shall include allowance for items of cost, and overhead as specified in this paragraph. Pending such determination, energy so released shall be paid for by the district at the rate for firm energy but the determination of compensation shall not be controlled by such rate.

During any year beginning June 1, the district shall not use any secondary energy nor any unused State energy, until it has first used subsequent to June 1, next preceding, an amount of firm energy equivalent to one-twelfth of the amount of firm energy it is obligated to take and/or pay for annually multiplied by the number of months elapsed since June 1 next preceding.

(4) If, due to temporary deficiency in secondary energy regularly used by the district, substitute energy is requested by the district in excess of the energy made available under the foregoing subparagraph (3) (*b*) the city and/or the company may release so much energy as may be practicable on the same terms as provided in subsection (3) (*b*) preceding.

D. To the municipalities of—

	Per cent
Pasadena	1.6183
Glendale	1.8867
Burbank	.5896
Total	4.0946

NOTE.—Amendments of March 10, 1931, and July 1, 1931, extended the date for submission of an allocation to July 15 and November 16, 1931, respectively. An agreement having been submitted to the Secretary whereby only the above municipalities elected to contract, in the amounts above stated, and the other municipalities named in regulations of April 25, 1930, i. e., Anaheim, Beverly Hills, Colton, Fullerton, Newport Beach, Riverside, San Bernardino, and Santa Ana, withdrew, the allocation under subsection D is amended as above, effective November 16, 1931.

E. To the City of Los Angeles, 14.9054% (being 13% as provided in regulations of April 25, 1930, plus 1.9054%, which is the balance of 6% allocated the municipalities by regulations of said date and not applied for by them pursuant to subsection D as amended).

NOTE.—Amended as above, effective November 16, 1931. (See note under subsection D.)

F. To—

	Per cent
Southern California Edison Co. (Ltd.)	7. 2
Southern Sierras Power Co	. 9
Los Angeles Gas & Electric Corporation	. 9

NOTE.—Amended as above, effective November 16, 1931, to accord with allocation agreement submitted pursuant to subsection F as promulgated in regulations of April 25, 1930, time having been extended to July 15, 1931, by amendment of March 10, 1931, and to November 16, 1931, by amendment of July 1, 1931.

The foregoing allocations are subject to the following conditions:

(I) So much of the energy allocated to the States (thirty-six per centum (36%) of firm energy) and not in use by them, or failing their use by the district for the above purposes, shall be taken and paid for one-half by the city and one-half by the following allottees in the ratio stated below:

	Per cent
Southern California Edison Co. (Ltd.)	80
Los Angeles Gas & Electric Corporation	10
Southern Sierras Power Co	10

NOTE.—Amended as above, effective November 16, 1931, to accord with an allocation agreement submitted in accordance with subsection F as promulgated in regulations of April 25, 1930, time having been extended to July 15, 1931, by amendment of March 10, 1931, and to November 16, 1931, by amendment of July 1, 1931.

(II) So much of the energy allocated to the municipalities by regulations of April 25, 1930 (6%) as has been relinquished by them (1.9054%), and so much of the energy contracted for by them (4.0946%), as is not used by them directly or under contract for municipal purposes and/or distribution to their inhabitants, shall be taken and paid for by the city (without, however, impairing the obligation of said municipalities to the United States to take and pay for energy contracted for by them, respectively).

NOTE.—Amended as above, effective November 16, 1931, to accord with an allocation agreement and elections thereunder submitted in accordance with subsection D. (See note under subsection D.)

(III) So much of the energy allocated to the Southern Sierras Power Co., the San Diego Consolidated Gas & Electric Co., and the Los Angeles Gas & Electric Corporation by regulations of April 25, 1930, as has not been or is not contracted for by them shall be taken and paid for by the Southern California Edison Co. (Ltd.).

NOTE.—Amended as above, effective November 16, 1931.

(IV) If any allottee is permitted by the United States to divert water from the reservoir at a time when the reservoir is not spilling, in consequence of which the amount of energy which would have been utilized is diminished, such diminution, to such extent as may be provided in the contract, shall be debited to the allocation of firm energy herein made to such allottee; and charge for the energy equivalent of such diversion shall be made, and the amount of energy which the allottee shall otherwise be obligated to take and pay for hereunder shall be correspondingly reduced.

The reservoir shall be considered as spilling whenever water is being discharged in excess of the amount used for the generation of power, whether such waste occurs over the spillway or otherwise.

(V) Each of the States of Arizona and Nevada may, from time to time within the period of the aforesaid lease, contract for energy for use within such State in any amount until the total allocated, respec-

tively, to each is in use as provided above; and may terminate such contract, or contracts, without prejudice to the right to again contract for such energy. All such contracts shall be executed with the Secretary. A contract requiring one thousand (1,000) horsepower (of maximum demand) or less may become effective or be terminated on six months' written notice of requirement or termination given the director by the State; provided, that the notice given shall be two years if in the twelve months preceding said notice of demand the total increment to such State has exceeded five thousand (5,000) horsepower of maximum demand or if in the twelve months preceding said notice of termination the decrement to such State has exceeded five thousand (5,000) horsepower of maximum demand. In all cases the director shall immediately transmit such notice to each lessee. Whenever the amount in use is in excess of five thousand (5,000) horsepower of maximum demand, the lessees and other allottees respectively shall be compensated for property rendered idle by use of such excess in such amount as the Secretary shall determine to be equitable.

Firm energy not contracted for by the States shall be available for use by the district as herein elsewhere provided, and if not in use by the States and/or the district, shall be taken and paid for one-half by the city and one-half as follows: By the Southern California Edison Co. (Ltd.), 80 per cent of said one-half; by the Southern Sierras Power Co., 10 per cent of said one-half; and by the Los Angeles Gas & Electric Corporation, 10 per cent of said one-half.

NOTE.—Amended as above, effective November 16, 1931, to accord with an allocation agreement submitted pursuant to subsection F; see note thereunder. Also, regulations of April 25, 1930, provided for contingencies in event a State should make a firm contract under section 5c of the Boulder Canyon project act in lieu of accepting the allocation therein made. As the time for execution of such a firm contract under section 5c of that act has expired by the limitation stated in the act the balance of this paragraph as originally promulgated is revoked, effective November 16, 1931.

Of secondary energy.

The district shall have the right to purchase and use all secondary energy as provided in these regulations for the purposes stated in the first paragraph of subdivision C of this article. The city shall have the right to purchase and use one-half, and the allottees named in subsection F shall have the right to purchase and use a total of one-half (in the proportions in which they share the obligations assumed under subsection "v" as to unused State allocations) of such secondary energy as is not used by the district. Any such energy not used by one lessee shall be available, for the time being, to the other. To the extent that secondary energy is not taken as aforesaid, then and in such event the United States reserves the right to take, use, and dispose of such energy, from time to time, as it sees fit, giving credit therefor as provided in these regulations.

NOTE.—Modified as above, effective November 16, 1931, an allocation agreement having been submitted by the allottees named in subsection F whereby the obligation of the Southern California Edison Co. (Ltd.), under subsection "v", and its conditional rights to secondary energy under this paragraph, were both shared in the same ratio as the allocation of firm energy among them under subsection F. (See note under subsections F and "v".)

Of firm energy allocated to, but not used by the district.

In the event the district shall fail for any reason to use all or any of the firm energy herein allotted to it for the only purpose for which said firm energy is allotted to it, that is, for pumping water into

and in its aqueduct, then no disposition shall be made of such firm energy by the Secretary without first giving to a successor to the district which may undertake to build or maintain a Colorado River Aqueduct the opportunity to take said firm energy for the same purpose and under the same terms as those to which the district was obligated.

In the event no such successor takes said firm energy as provided above, then no disposition of such firm energy shall be made by the Secretary without first giving to each lessee the opportunity to contract on equal terms and conditions, to be prescribed by the Secretary, for one-half of such energy, together with such portion of the remainder as the other lessee shall not elect to take.

Of firm energy not disposed of in the foregoing allocations.

In case the dam which the United States erects provides a maximum water surface elevation in excess of one thousand two hundred twenty-two (1,222) feet above sea level (United States Geological Survey datum), and thereby increases the quantity of firm energy above the quantity of four billion two hundred forty million (4,240,000,000) kilowatt-hours allocated above, said additional firm energy shall be generated, taken, and paid for by the city on the same terms and conditions as other firm energy under its contract, but without prejudice to the foregoing allocations or to the contractual rights of other allottees.

NOTE.—Regulations promulgated April 25, 1930, reserved to the Secretary the right to contract with any municipality for this additional energy on or before April 15, 1931, and provided that energy not so contracted for should be taken and paid for by the city. This time was extended to July 15, 1931, by amendment of March 10, 1931, and to November 16, 1931, by amendment of July 1, 1931. No such contract having been applied for, this subsection is amended as above, effective November 16, 1931.

VI

Contractors hereunder shall agree as follows:

(1) To pay the United States for the use of falling water for the generation of energy for their own use, respectively, by the equipment leased hereunder, as follows:

(*a*) One and sixty-three hundredths mills ($0.00163) per kilowatt-hour (delivered at transmission voltage), for firm energy;

(*b*) One-half mill ($0.0005) per kilowatt-hour (delivered at transmission voltage), for secondary energy.

(2) The lessees of the power plant shall compensate the United States for the use of leased equipment as herein elsewhere provided;

(3) The lessees shall also maintain said equipment in first-class operating condition, including repairs to and replacements of machinery;

(4) Allottees other than the lessees shall pay the United States, for credit to the lessees, on account of use of the leased equipment;

(5) Allottees other than the lessees shall pay the United States, for credit to the lessees, on account of maintenance of said equipment, including repairs to and replacements of machinery; provided, however, that if the expenditures for replacements shall exceed at any time the sum accumulated by the lessees as a depreciation reserve in accordance with rules and regulations prescribed by the Secretary, pursuant to the Boulder Canyon project act, less all amounts pre-

viously withdrawn for replacements, then the rates aforesaid shall be readjusted as hereinafter provided so as to reimburse the said lessees severally for such excess expenditures within the term of said lease.

All energy shall be measured at generator voltage and suitable metering equipment shall be provided and installed by the United States for this purpose. Suitable correction shall be made in the amounts of energy as measured at generator voltage to cover step-up transformer losses and energy required for operation of station auxiliaries in determining the amounts of energy delivered at transmission voltage as provided in these regulations.

At the end of fifteen (15) years from the date of execution of lease and every ten (10) years thereafter, the above rates of payment for firm and secondary energy shall be readjusted upon demand of any party thereto, either upward or downward as to price, as the Secretary may find to be justified by competitive conditions at distributing points or competitive centers.

The rate for falling water for generation of firm energy, which shall be uniform for all lessees, provided for by any such readjustment shall be arrived at by deducting from the price of electrical energy justified by competitive conditions at distributing points or competitive centers—(1) all fixed and operating costs as provided for herein of transmission to such points; (2) all fixed and operating costs of such portion of the power-plant machinery as is to be operated and maintained by the several lessees, including the costs of repairs and replacements, together with readjustment as to replacements as is provided for in paragraph five (5) above; it being understood that such readjusted rates shall under no circumstances exceed the value of said energy, based upon competitive conditions at distributing points or competitive centers.

If the lessees or either of them shall not obtain a renewal of said lease at the expiration of the contract period, equitable adjustment for major replacements of machinery made between the date of the last readjustment of rates and the end of the contract period shall be made at the expiration of the lease.

VII

The amount of firm energy for the first year of operation (June 1 to May 31, inclusive) following the date of the completion of the dam as announced by the Secretary shall be defined as being four billion two hundred forty million (4,240,000,000) kilowatt-hours. For every subsequent year the amount defined as firm energy shall be decreased by eight million seven hundred sixty thousand (8,760,000) kilowatt-hours from that of the previous year.

Nevertheless, if it be determined by the Secretary that the rate of decrease of kilowatt-hours per year as above stated is not in accord with actual conditions, the Secretary reserves the right to fix a lesser rate for any year (June 1 to May 31, inclusive) in advance.

If the dam erected by the United States provides a maximum water surface elevation in excess of 1,222 feet above sea level (United States Geological Survey datum), the United States reserves the right to dispose of additional firm energy thereby made available, not to exceed ninety million (90,000,000) kilowatt-hours per year, subject to pro rata of the eight million seven hundred sixty thousand (8,760,000) kilowatt-hours annual diminution above provided for.

The term "secondary energy" wherever used herein shall mean all electrical energy generated in one year (June 1 to May 31, inclusive) in excess of the amount of firm energy as hereinabove defined, available in such year.

VIII

The contractors shall pay monthly for all energy in accordance with the rates established or provided for herein. When energy taken in any month is not in excess of one-twelfth (1/12) of the minimum annual obligation, bill for such month shall be computed at the rate for firm energy in effect when such energy was taken on the basis of the actual amount of energy used during such month. All energy used during any month in excess of one-twelfth (1/12) of the minimum annual obligation shall be paid for at the rate for secondary energy in effect when such energy was taken; provided, however, that the secondary rate shall not apply to any energy taken during any month unless and until an amount of energy equivalent to one-twelfth (1/12) of the minimum annual obligation has been taken for all months beginning with the month of June immediately preceding; provided, however, that the bill for the month of May shall not be less than the difference between the minimum annual payment and the sum of the amounts charged for firm energy during the preceding eleven (11) months. The United States will submit bills to all contractors by the fifth of each month immediately following the month during which the energy is generated, and payments shall be due on the first day of the month immediately succeeding. If such charges (less, in bills to lessees, credit allowances due lessees for generation for other allottees) are not paid when due, a penalty of one per centum (1%) of the amount unpaid shall be added thereto, and thereafter an additional penalty of one per centum (1%) of the amount unpaid shall be added on the first day of each calendar month thereafter during such delinquency.

IX

The total payments made by each contractor for firm energy available in any year (June 1 to May 31, inclusive), whether any energy is generated or not, exclusive of its payments for use of machinery, shall be not less than the number of kilowatt-hours of firm energy available to said contractor and which said contractor is obligated to take and/or pay for during said year, multiplied by one and sixty-three hundredths mills ($0.00163), or multiplied by the adjusted rate of payment for firm energy in case the said rate is adjusted as provided in Article VI hereof, less credits on account of charges to other allottees, as provided for and referred to in Article IV hereof. For a fractional year at the beginning or end of the contract period, the minimum annual payment for firm energy shall be proportionately adjusted in the ratio that the number of days water is available for generation of energy in such fractional year bears to three hundred sixty-five (365). Provided, however, that in order to afford a reasonable time for the respective lessees to absorb the energy contracted for, the minimum annual payments by each for the first three (3) years after energy is ready for delivery to such lessees, respectively, as announced by the Secretary, shall be as

follows, in percentages of the ultimate annual obligation, to take and/or pay for firm energy:

	Per cent
First year	55
Second year	70
Third year	85
Fourth year and all subsequent years	100

During said absorption period, if the quantity of energy taken in any one year (June 1 to May 31, inclusive) is in excess of the above percentages of the ultimate obligation during such year to take and/or pay for firm energy, such excess shall be paid for at the rate for secondary energy. Provided further, that the minimum annual payment shall be reduced in case of interruptions or curtailment of delivery of water as provided in Paragraph X hereof.

X

The United States will deliver water continuously to each lessee in the quantity, in the manner, and at the times necessary for the generation of the energy which each of said lessees has the right and/or obligation to generate under its contract in accordance with the load requirements of each of said lessees and of allottees for which the respective lessees are generating agencies, excepting only that such delivery shall be regulated so as not to interfere with the necessary use of said Boulder Canyon Dam and Reservoir for river regulation, improvement of navigation, flood control, irrigation, or domestic uses, and the satisfaction of present perfected rights in or to the waters of the Colorado River or its tributaries, in pursuance of Article VIII of the Colorado River compact. The United States reserves the right temporarily to discontinue or reduce the delivery of water for the generation of energy at any time for the purposes of maintenance, repairs and/or replacements, or installation of equipment, and for investigations and inspections necessary thereto; provided, however, that the United States shall, except in case of emergency, give to the lessees reasonable notice in advance of such temporary discontinuance or reduction, and that the United States shall make such inspections and perform such maintenance and repair work after consultation with the lessees at such times and in such manner as will cause the least inconvenience to the lessees and the allottees, and shall prosecute such work with diligence, and, without unnecessary delay, will resume delivery of water so discontinued or reduced. Should the delivery of water be discontinued or reduced below the amount required, severally, for the normal generation of firm energy for the payment of which the contractor obligates itself, the total number of hours of such discontinuance or reduction in any year shall be determined by taking the sum of the number of hours during which the delivery of water is totally discontinued, and the product of the number of hours during which the delivery of water is partially reduced, and the percentage of said partial reduction below the actual quantity of water required for the normal generation of firm energy. Total or partial reductions in delivery of water which do not reduce the power output below the amount required at the time for the normal generation of firm energy will not be considered in determining the total hours of discontinuance in any year. The minimum annual payment shall be reduced by the ratio that the total number of hours of such discontinuance bears

to eight thousand seven hundred sixty (8,760). In no event shall any liability accrue against the United States, its officers, agents, and/or employees, for any damage, direct or indirect, arising on account of drought, hostile diversion, act of God, or of the public enemy, or other similar cause.

Each lessee shall make full and complete written monthly reports as directed by the Secretary, on forms to be supplied by the United States, of all electrical energy generated by it and the disposition thereof to allottees. Such reports shall be made and delivered to the director on the third day of the month immediately succeeding the month in which the electrical energy is generated, and the records and data from which such reports are made shall be accessible to the United States on demand of the Secretary.

XI

Any agency receiving a contract for electrical energy equivalent to one hundred thousand (100,000) firm horsepower, or more, may when deemed feasible by the Secretary, from engineering and economic considerations and under general regulations prescribed by him, be required to permit any other agency having contracts for less than the equivalent of twenty-five thousand (25,000) firm horsepower, upon application to the Secretary made within sixty (60) days from the execution of the contract of the agency the use of whose transmission line is applied for, to participate in the benefits and use of any main transmission line constructed or to be constructed by the former for carrying such energy (not exceeding, however, one-fourth (¼) the capacity of such line), upon payment by such other agencies of a reasonable share of the cost of construction, operation, and maintenance thereof.

XII

The use is authorized of such public and reserved lands of the United States as may be necessary or convenient for the construction, operation, and maintenance of main transmission lines, to transmit electrical energy generated at Hoover Dam, together with the use of such public and reserved lands of the United Stated as may be designated by the Secretary, from time to time, for camp sites, residences for employees, warehouses, and other uses incident to the operation and maintenance of the power plant and incidental works.

XIII

The Secretary, or his representatives, shall at all times have the right of ingress to and egress from all works of the contractors for power or power privileges, for the purpose of inspection, repairs, and maintenance of works of the United States, and for all other proper purposes. The Secretary or his representatives shall also have free access at all reasonable times to the books and records of contractors for power or power privileges, relating to the generation, transmission, and disposition of electrical energy with the right at any time during office hours to make copies of or from the same.

XIV

All patents, grants, contracts, concessions, leases, permits, licenses, rights of way, or other privileges from the United States or under its authority, necessary or convenient for the use of waters of the

Colorado River or its tributaries, or for the generation or transmission of electrical energy generated by means of the waters of said river or its tributaries, whether under the Boulder Dam project act, the Federal water power act, or otherwise, shall be upon the express condition and with the express covenant that the rights of the recipients or holders thereof to waters of the river or its tributaries, for the use of which the same are necessary, convenient, or incidental, and the use of the same shall likewise be subject to and controlled by said Colorado River compact.

XV

All contracts for purchase of energy available at Hoover Dam shall be made directly with the United States.

XVI

No contract for electrical energy or for generation of electrical energy shall be of longer duration than fifty (50) years from the date at which such energy is ready for delivery as announced by the Secretary.

XVII

The holder of any contract for electrical energy not in default thereunder shall be entitled to a renewal thereof upon such terms and conditions as may be authorized or required under the then existing laws and regulation, unless the property of such holder dependent for its usefulness on a continuation of the contract be purchased or acquired and such holder be compensated for damages to its property, used and useful in the transmission and distribution of such electrical energy and not taken, resulting from the termination of the supply.

XVIII

All contracts shall be subject to these, and such other rules and regulations conforming to the Boulder Canyon project act as the Secretary may from time to time promulgate; provided, however, that no right under any contract then existing shall be impaired or obligation thereunder be extended thereby; and provided, further, that opportunity for hearing shall be afforded such contractors by the Secretary prior to modification or repeal thereof or promulgation of additional regulations.

RAY LYMAN WILBUR,
Secretary of the Interior.

WASHINGTON, D. C.
April 25, 1930.

NOTE.—Amended, as noted in the text, March 10, 1931, July 1, 1931, and Nov. 16, 1931.

[APPENDIX 2]

BOULDER CANYON PROJECT

CONTRACT FOR LEASE OF POWER PRIVILEGE

UNITED STATES
AND
THE CITY OF LOS ANGELES
AND
SOUTHERN CALIFORNIA EDISON CO. (LTD.)

April 26, 1930
Amended May 28, 1930, and September 23, 1931

[NOTE.—The contract as it appears here is a consolidation of the original and various supplementary contracts, which are referred to in footnotes.]

CONTRACT FOR LEASE OF POWER PRIVILEGE

Article

CONTRACT FOR LEASE OF POWER PRIVILEGE[1]

(1) This contract, made this 26th day of April, nineteen hundred thirty, pursuant to the act of Congress approved June 17, 1902 (32

[1] Consolidating contracts of April 26, 1930, May 28, 1930, Sept. 23, 1931. The full texts of these supplementary contracts follow:

SUPPLEMENTAL CONTRACT FOR LEASE OF POWER PRIVILEGE

MAY 28, 1930

(1) This supplemental contract, made this 28th day of May, nineteen hundred thirty, pursuant to the act of Congress approved June 17, 1902 (32 Stat. 388), and acts amendatory thereof or supplementary thereto, all of which acts are commonly known and referred to as the reclamation law, and particularly pursuant to the act of Congress approved December 21, 1928 (45 Stat. 1057), designated the Boulder Canyon project act, between the United States of America, hereinafter referred to as the United States, acting for this purpose by Ray Lyman Wilbur, Secretary of the Interior, hereinafter styled the Secretary, and, severally, the City of Los Angeles, a municipal corporation, and its department of water and power (said department acting herein in the name of the city, but as principal in its own behalf as well as in behalf of the city; the term city as used in this contract being deemed to be both the City of Los Angeles and its department of water and power), and Southern California Edison Co. (Ltd.), a private corporation, hereinafter styled the company, both of said corporations being organized and existing under the laws of the State of California, and hereinafter styled the lessees.

Witnesseth:

EXPLANATORY RECITALS

(2) Whereas, under date of April 26, 1930, the parties hereto entered into a contract whereby, among other things, the United States agreed under the terms and conditions therein set forth to construct a dam as therein described in the main stream of the Colorado River at Black Canyon, and agreed also to construct in connection therewith outlet works, pressure tunnels, power plant building, and to furnish and install generating, transforming and high voltage switching equipment for the generation of the electrical energy allocated to the various allottees, respectively, as stated in article fourteen (14) thereof; and

(3) Whereas, the aforesaid contract provides also, among other things, for the lease to the city and to the company of power plant units and corresponding plant facilities necessary to generate the energy allocated to them and energy for those allottees therein named for whom the lessees are designated the generating agency, together with the right to generate such electrical energy; and

(4) Whereas, it was the intention that the department of water and power of the City of Los Angeles, as well as the City of Los Angeles should be firmly bound as principals to said contract of April 26, 1930; and

(5) Whereas, said contract of April 26, 1930, does not by its terms become effective until after the first act of Congress appropriating funds for commencement of construction of Boulder Canyon Dam has become law; and

(6) Whereas, such appropriation has not yet been made and it is desired that the aforesaid contract be clarified by amendment of articles one (1), fourteen (14), and seventeen (17), so as to avoid any uncertainty as to the intent thereof;

(7) Now, therefore, in consideration of the mutual covenants contained herein and in said contract of April 26, 1930, and in consideration of the United States proceeding with the construction of Boulder Canyon Dam and appurtenant works, the parties hereto mutually covenant and agree as follows, to wit:

(8) Article one (1) of the aforesaid contract of April 26, 1930, is hereby amended so as to read as follows, to wit:

1. This contract, made this 26th day of April, nineteen hundred thirty, pursuant to the act of Congress approved June 17, 1902 (32 Stat. 388), and acts amendatory thereof or supplementary thereto, all of which acts are commonly known and referred to as the reclamation law, and particularly pursuant to the act of Congress approved December 21, 1928 (45 Stat. 1057), designated the Boulder Canyon

Stat. 388), and acts amendatory thereof or supplementary thereto, all of which acts are commonly known and referred to as the reclama-

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project act, between the United States of America, hereinafter referred to as the United States, acting for this purpose by Ray Lyman Wilbur, Secretary of the Interior, hereinafter styled the Secretary, and, severally, the City of Los Angeles, a municipal corporation, and its department of water and power (said department acting herein in the name of the city, but as principal in its own behalf as well as in behalf of the city; the term city as used in this contract being deemed to be both the City of Los Angeles and its department of water and power), and Southern California Edison Co. (Ltd.), a private corporation, hereinafter styled the company, both of said corporations being organized and existing under the laws of the State of California, and hereinafter styled the lessees.

ALLOCATION OF ENERGY

(9) Article fourteen (14) of the aforesaid contract of April 26, 1930, is hereby amended so as to read as follows, to wit:

Allocation of energy

14. The Secretary reserves and as against the lessees may exercise the power in accordance with the provisions of this contract to contract with the other allottees named in this article for the furnishing of energy to such allottees at transmission voltage in accordance with the allocation to each such allottee and the Secretary is authorized by each lessee to enforce as against it the rights acquired by such other allottees under such contracts. Each lessee severally, in accordance with the agency designations made in paragraph (*d*) of article ten (10), convenants to generate and furnish energy, at transmission voltage, needed to meet the following requirements of the allottees (other than lessees) named below, the allocations of firm energy being made in percentages of the total firm energy as defined in article fifteen (15) hereof, to be delivered to such allottees at said Boulder Dam power plant.

Of firm energy.

A. To the State of Nevada, for use in Nevada, not exceeding eighteen per centum (18%) of said total firm energy.

B. To the State of Arizona, for use in Arizona, not exceeding eighteen per centum (18%) of said total firm energy.

Should either of the States not take its full eighteen per centum (18%) allocation within a period of twenty (20) years hereof, the other may then contract for the energy not so taken up to four per centum (4%) of the total firm energy, provided that the combined amount used by the two States shall not, at any time, exceed thirty-six per centum (36%) of such total firm energy.

C. To the Metropolitan Water District of Southern California for pumping Colorado River water into and in its aqueduct for the use of such district within the following limits:

1. Thirty-six per centum (36%) of said total firm energy; plus

2. All secondary energy developed at the Boulder Dam power plant as provided in article seventeen (17) hereof; plus

3. So much of the firm energy allocated to the States, the city, and the company as may not be in use by them. Energy allocated to the States but not in use by them shall be released to the district by the two lessees equally (unless they agree upon a different ratio) as follows:

(*a*) If the district makes a firm contract with the Secretary for the balance of the lease period for part or all of such unused States' energy (subject to the first right of the States thereto) such contract shall be made effective upon two years' written notice to the Secretary, and compensation to the lessees, respectively, for main transmission line property rendered idle;

(*b*) If the district does not so make a firm contract for such energy, then energy allocated to the States but not in use by them, shall be released to the district upon not less than fifteen (15) months' written notice to the Secretary and at such compensation as the district and such lessees, respectively, may agree upon, to cover cost and overhead of replacing energy which otherwise would have been received at the Pacific Coast end of the main transmission lines by the lessees, respectively. Such cost shall include interest on and depreciation and operation and maintenance of the plant capacity while required for the generation of such substitute energy; and also appropriate allowance for interest on and maintenance

tion law, and particularly pursuant to the act of Congress approved December 21, 1928 (45 Stat. 1057), designated the Boulder Canyon

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and depreciation of plant capacity rendered idle because of cessation of generation of such substitute energy until such time as such plant capacity would otherwise have been installed by the lessees, respectively, for their own requirements. If the district and the respective lessees fail to agree on such compensation, such energy shall nevertheless be released to the district, and the disagreement shall be determined in accordance with article thirty-five (35) (*a*) hereof. Such determination shall include allowance for items of cost, and overhead as specified in this paragraph. Pending such determination, energy so released shall be paid for by the district at the rate for firm energy, but the determination of compensation under article thirty-five (35) (*a*) hereof shall not be controlled by such rate.

During any year beginning June first, the district shall not use any secondary energy nor any unused State energy, until it has first used, subsequent to June first, next preceding, an amount of firm energy equivalent to one-twelfth of the amount of firm energy it is obligated to take and/or pay for annually multiplied by the number of months elapsed since June first next preceding.

(4) If, due to temporary deficiency in secondary energy regularly used by the district, substitute energy is requested by the district in excess of the energy made available under the foregoing subparagraph (3) (*b*) the city and/or the company may release so much energy as may be practicable on the same terms as provided in subsection (3) (*b*) preceding.

D. To the municipalities of Anaheim, Beverly Hills, Burbank, Colton, Fullerton, Glendale, Newport Beach, Pasadena, Riverside, San Bernardino, and Santa Ana (referred to herein as "the municipalities"), six per centum (6%) in all, to be allocated between them as they may agree; but if no agreement is submitted to the Secretary on or before April 15, 1931, the Secretary shall determine the allocation of each.

E. To the City of Los Angeles, thirteen per centum (13%).

F. To Southern California Edison Co. (Ltd.), the Southern Sierras Power Co., the San Diego Consolidated Gas & Electric Co., and the Los Angeles Gas & Electric Corporation, referred to herein as the companies, nine per centum (9%) in all, division whereof between the companies shall be made according to mutual agreement among them, if possible. If no such agreement is submitted to the Secretary on or before April 15, 1931, the Secretary shall determine the allocation of each.

It is further agreed that—

(I) So much of the energy allocated to the States (thirty-six per centum (36%) of the firm energy) and not in use by them, or, failing their use, by the district for the above purposes, shall be taken and paid for one-half by the city and one-half by the company.

In addition, all firm energy allocated to the city (thirteen per centum (13%)) shall be taken and paid for by the city.

(II) All of the energy allocated to the municipalities may be contracted for in compliance with regulations of the Secretary, by any one or more of them, as they may agree, on or before April 15, 1931. So much of the energy allocated to the municipalities as is not so contracted for, or, if contracted for, not used by them directly or under contract for municipal purposes and/or distribution to their inhabitants shall be taken and paid for by the city.

(III) So much of the energy allocated to the Southern Sierras Power Co. the San Diego Consolidated Gas & Electric Co., and the Los Angeles Gas & Electric Corporation as is not firmly contracted for by them, severally, in compliance with regulations of the Secretary on or before April 15, 1931, shall be taken and paid for by the company.

(IV) If any allottee is permitted by the United States to divert water from the reservoir at a time when the reservoir is not spilling, in consequence of which the amount of energy, which would have been utilized is diminished, such diminution shall be debited to the allocation of firm energy herein made to such allottee; and charge for the energy equivalent of such diversion shall be made, and the amount of energy which the allottee shall otherwise be obligated to take and pay for hereunder shall be correspondingly reduced.

The reservoir shall be considered as spilling whenever water is being discharged in excess of the amount used for the generation of power, whether such waste occurs over the spillway or otherwise.

project act, between the United States of America, hereinafter referred to as the United States, acting for this purpose by Ray Lyman

(v) Each of the States of Arizona and Nevada may, from time to time within the period of this lease, contract for energy for use within such State in any amount until the total allocated, respectively, to each is in use as provided above; and may terminate such contract, or contracts, without prejudice to the right to again contract for such energy. All such contracts shall be executed with the Secretary. A contract requiring one thousand (1,000) horsepower (of maximum demand) or less may become effective or be terminated on six months' written notice of requirement of termination given the director by the State; provided, that the notice given shall be two years if in the twelve months preceding said notice of demand the total increment to such States has exceeded five thousand (5,000) horsepower of maximum demand or if in the twelve months preceding said notice of termination the decrement to such State has exceeded five thousand (5,000) horsepower of maximum demand. In all cases the director shall immediately transmit such notice to each lessee. Whenever the amount in use is in excess of five thousand (5,000) horsepower of maximum demand, the lessees respectively shall be compensated for property rendered idle by use of such excess in such amount as the Secretary shall determine to be equitable. Firm energy not contracted for by the States shall be available for use by the district as herein elsewhere provided, and if not in use by the States and/or the district, shall be taken and paid for equally by the two lessees. No right which may be available to a State under section five (5) (*c*) of the Boulder Canyon project act to execute a firm contract for electrical energy for use within the State shall be impaired by any provision of this lease; but if contract thereunder be executed with the Secretary no provision of this lease shall apply for the benefit of such State. If, in consequence of execution of such contract, the Secretary requires the allocation to either lessee or to an allottee using such lessee's main transmission lines to be diminished, such lessee may terminate its rights and obligations hereunder within two months thereafter on written notice to the Secretary. Provided, further, that the combined allocation of nineteen per centum (19%) as herein made to the city and the municipalities shall not be reduced because of any such firm contract with a State for energy.

Of secondary energy.

It is further agreed that the district shall have the right to purchase and use all secondary energy as provided in article fifteen (15) and article seventeen (17) hereof for the purposes stated in the first paragraph of subdivision (*c*) of this article. The city and the company shall each have the right to purchase and use one-half of all secondary energy not used by the district. Any such energy not used by one lessee shall be available, for the time being, to the other. If secondary energy is not taken by the city, the district, and/or the company, then and in such event, the United States reserves the right to take, use, and dispose of such energy, from time to time, as it sees fit, giving credit therefor as provided in article twelve (12) hereof.

Of firm energy allocated to but not used by the district.

It is further agreed that in the event the district shall fail for any reason to use all or any of the firm energy herein allotted to it for the only purpose for which said firm energy is allotted to it, that is, for pumping water into and in its aqueduct then the Secretary shall dispose of such unused energy until required by the district for said purpose, crediting on the district's obligation the proceeds of such disposition as received; provided, however, that no disposition of such firm energy shall be made by the Secretary without first giving to a successor to the district which may undertake to build or maintain a Colorado River Aqueduct the opportunity to take said firm energy for the same purpose and under the same terms as those to which the district was obligated; and provided further, that in the event no such successor takes said firm energy as provided above, then no disposition of such firm energy shall be made by the Secretary without first giving to each lessee the opportunity to contract on equal terms and conditions, to be prescribed by the Secretary, for one-half of such energy, together with such portion of the remainder as the other lessee shall not elect to take.

Of firm energy not hereinbefore disposed of.

It is further agreed that the United States reserves the right, in case the dam which it erects provides a maximum water surface elevation in excess of one thousand two hundred twenty-two (1,222) feet above sea level (U. S. Geological

Wilbur, Secretary of the Interior, hereinafter styled the Secretary, and, severally, the City of Los Angeles, a municipal corporation, and

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Survey datum), and thereby increases the quantity of firm energy above the quantity of four billion two hundred forty million (4,240,000,000) kilowatt-hours allocated above, to dispose of such increase, but not to exceed ninety million (90,000,000) kilowatt-hours per year (June 1 to May 31, inclusive), to any municipality or municipalities by firm contract executed with the Secretary on or before April 15, 1931. Such disposition shall be without prejudice to any provision of this lease or of the allocation above referred to. So much of such additional energy as is not so contracted for shall be taken and paid for by the city. Generation of such additional energy shall, in any event, be effected by the city.

MINIMUM ANNUAL PAYMENT

(10) Article seventeen (17) of the aforesaid contract of April 26, 1930, is hereby amended so as to read as follows, to wit:

Minimum annual payment

17. The minimum quantity of firm energy which the city shall take and/or pay for each year (June 1 to May 31, inclusive), under the terms of this contract and after same is ready for delivery to the city as provided in subdivision (*a*) of article eleven (11) hereof, shall be thirty-seven per centum (37%) of all firm energy as defined in article fifteen (15) hereof for the generation of which the United States makes water available in said year, except as reduced by amounts of firm energy contracted for by others, as provided in article fourteen (14). In addition, the city agrees to take and pay for, as provided in the last paragraph of article fourteen (14) hereof, all firm energy (not to exceed ninety million (90,000,000)) kilowatt-hours per year (June 1 to May 31, inclusive), made available over and above the firm energy defined in article fifteen (15) hereof, by the erection of a dam which provides a maximum water surface elevation in excess of one thousand two hundred and twenty-two (1,222) feet above sea level (U. S. Geological Survey data).

The minimum quantity of firm energy which Southern California Edison Co. (Ltd.) shall take and/or pay for each year (June 1 to May 31, inclusive), under the terms of this contract and after same is ready for delivery to the company as provided in subdivision (*c*) of article eleven (11) hereof, shall be twenty-seven per centum (27%) of all firm energy as defined in article fifteen (15) hereof for the generation of which the United States makes water available in said year, except as reduced by amounts of firm energy contracted for by others as provided in article fourteen (14).

The total payments made by each lessee for firm energy available in any year (June 1 to May 31, inclusive), whether any energy is generated or not, exclusive of its payments for use of machinery, shall be not less than the number of kilowatt-hours of firm energy available to said lessee and which said lessee is obligated to take and/or pay for during said year, multiplied by one and sixty-three hundredths mills ($0.00163), or multiplied by the adjusted rate of payment for firm energy in case the said rate is adjusted as provided in article sixteen (16) hereof, less credits on account of charges to other allottees, as provided for and referred to in article twelve (12) hereof.

For a fractional year at the beginning or end of the contract period, the minimum annual payment for firm energy shall be proportionately adjusted in the ratio that the number of days water is available for generation of energy in such fractional year bears to three hundred sixty-five (365). *Provided, however*, That in order to afford a reasonable time for the respective lessees to absorb the energy contracted for, the minimum annual payments by each for the first three (3) years after energy is ready for delivery to such lessees, respectively, as announced by the Secretary, as herein elsewhere provided, shall be as follows, in percentages of the ultimate annual obligation, to take and/or pay for firm energy:

	Per cent
First year	55
Second year	70
Third year	85
Fourth year and all subsequent years	100

During said absorption period, if the quantity of energy taken in any one year (June 1 to May 31, inclusive), is in excess of the above percentages of the ultimate

its department of water and power (said department acting herein in the name of the city, but as principal in its own behalf as well as

obligation during such year to take and/or pay for firm energy, such excess shall be paid for at the rate for secondary energy. *Provided further*, That the minimum annual payment shall be reduced in case of interruptions or curtailment of delivery of water as provided in article twenty-one (21) hereof.

CONTRACT AMENDED ONLY AS SPECIFICALLY PROVIDED

(11) Except as specifically amended hereby the aforesaid contract of April 26, 1930, shall remain in full force and effect, and said contract amended as herein provided is adopted and reaffirmed by the parties hereto as of the day and year first above written.

MEMBER OF CONGRESS CLAUSE

(12) No Member of or Delegate to Congress or Resident Commissioner shall be admitted to any share or part of this contract, or to any benefit that may arise therefrom. Nothing, however, herein contained shall be construed to extend to this contract if made with a corporation for its general benefit.

In witness whereof, the parties hereto have caused this supplemental contract to be executed the day and year first above written.

THE UNITED STATES OF AMERICA,
By RAY LYMAN WILBUR, *Secretary of the Interior.*

Attest:
NORTHCUTT ELY.

THE CITY OF LOS ANGELES, acting by and through its Board of Water and Power Commissioners,
By JOHN R. HAYENS, *President.*

Attest:
JAS. P. VROMAN, *Secretary.*

DEPARTMENT OF WATER AND POWER OF THE CITY OF LOS ANGELES, by the Board of Water and Power Commissioners,
By JOHN R. HAYNES, *President.*

Attest:
JAS. P. VROMAN, *Secretary.*

SOUTHERN CALIFORNIA EDISON CO. (Ltd.)
By JOHN B. MILLER, *Chairman.*

Attest:
CLIFTON PETERS, *Secretary.*

SUPPLEMENTAL CONTRACT FOR LEASE OF POWER PRIVILEGE

SEPTEMBER 23, 1931

(1) This supplemental contract, made this twenty-third day of September, nineteen hundred thirty-one, pursuant to the act of Congress approved June 17, 1902 (32 Stat. 388), and acts amendatory thereof or supplementary thereto, all of which acts are commonly known and referred to as the reclamation law, and particularly pursuant to the act of Congress approved December 21, 1928 (45 Stat. 1057), designated the Boulder Canyon project act, between the United States of America, hereinafter referred to as the United States, acting for this purpose by Ray Lyman Wilbur, Secretary of the Interior, hereinafter styled the Secretary, and, severally, the city of Los Angeles, a municipal corporation, and its department of water and power (said department acting herein in the name of the city, but as principal in its own behalf as well as in behalf of the city; the term city as used in this contract being deemed to be both the city of Los Angeles and its department of water and power), and Southern California Edison Co. (Ltd.), a private corporation, hereinafter styled the company, both of said corporations being organized and existing under the laws of the State of California, and hereinafter styled the lessees.

Witnesseth:

in behalf of the city; the term city as used in this contract being deemed to be both the city of Los Angeles and its department of

EXPLANATORY RECITALS

(2) Whereas, under date of April 26, 1930, the parties hereto entered into a contract whereby, among other things, the United States agreed under the terms and conditions therein set forth to construct a dam as therein described in the main stream of the Colorado River at Black Canyon, and agreed also to construct in connection therewith outlet works, pressure tunnels, power plant building, and to furnish and install generating, transforming and high voltage switching equipment for the generation of the electrical energy allocated to the various allottees, respectively, as stated in article fourteen (14) thereof, which said agreement was amended in certain respects by supplemental contract of date May 28, 1930; and

(3) Whereas, the said contract of April 26, 1930, amended as aforesaid, provides also, among other things, for the lease to the city and to the company of power plant units and corresponding plant facilities necessary to generate the energy allocated to them, and energy for those alottees therein named for whom the lessees are designated the generating agency, together with the right to generate such electrical energy; and

(4) Whereas, the Secretary has been requested to further amend the said contract of April 26, 1930, amended as aforesaid, in certain respects and particularly so in respect of the time within which the allottees mentioned in article fourteen (14) thereof shall be required to contract for the purchase of electrical energy allotted to them;

(5) Now, therefore, in consideration of the covenants contained herein and in said contract of April 26, 1930, amended as aforesaid, the parties hereto mutually covenant and agree as follows, to wit:

COMPENSATION FOR USE OF MACHINERY

(6) Article nine (*a*) (9*a*) of the said contract of April 26, 1930, amended as aforesaid, is hereby amended so as to read as follows, to wit:

> 9. (*a*) Compensation for the use, for the periods of lease thereof, of machinery and equipment furnished and installed by the United States, for each lessee, respectively, for the generation of electrical energy, equal to the cost thereof, including interest charges at the rate of four per centum (4%) per annum, compounded annually from the date of advances to the Colorado River Dam fund for the purchase of such equipment and machinery to June first of the year next preceding the year when the initial installment becomes due under this article, shall be paid to the United States by the lessees, severally, in ten (10) equal annual installments, so as to amortize the total cost (including interest as fixed above), and interest thereafter upon the unpaid balance of such total cost at the rate of four per centum (4%) per annum. The first installment payable by each lessee shall be due on June first next following the date the machinery leased by such lessee is ready for operation and water is available therefor, as announced by the Secretary, and the subsequent nine (9) installments shall be paid on June first of each year thereafter.

ALLOCATION OF ENERGY

(7) (*a*) Subdivision D of article fourteen (14) of the contract of April 26, 1930, amended as aforesaid, is hereby amended so as to read as follows, to wit:

> D. To the municipalities of Anaheim, Beverly Hills, Burbank, Colton, Fullerton, Glendale, Newport Beach, Pasadena, Riverside, San Bernardino, and Santa Ana (referred to herein as "the municipalities"), six per centum (6%) in all, to be allocated between them as they may agree; but if no agreement is submitted to the Secretary on or before November 16, 1931, the Secretary shall determine the allocation of each.

(*b*) Subdivision F of said article fourteen (14) is hereby amended so as to read as follows, to wit:

> F. To Southern California Edison Co. (Ltd.), the Southern Sierras Power Co., the San Diego Consolidated Gas & Electric Co., and the Los Angeles Gas & Electric Corporation, referred to herein as the companies, nine per centum (9%) in all, division whereof between the companies shall be made according to mutual agreement among them, if possible. If no such agreement is submitted to the Secretary on or before November 16, 1931, the Secretary shall determine the allocation of each.

water and power), and Southern California Edison Co. (Ltd.), a private corporation, hereinafter styled the company, both of said cor-

(c) Subdivision F (II) of said article fourteen (14) is hereby amended so as to read as follows, to wit:

(II) All of the energy allocated to the municipalities may be contracted for in compliance with regulations of the Secretary, by any one or more of them, as they may agree, on or before November 16, 1931. So much of the energy allocated to the municipalities as is not so contracted for, or if contracted for, not used by them directly or under contract for municipal purposes and/or distribution to their inhabitants, shall be taken and paid for by the city.

(d) Subdivision F (III) of said article fourteen (14) is hereby amended so as to read as follows, to wit:

(III) So much of the energy allocated to the Southern Sierras Power Co., the San Diego Consolidated Gas & Electric Co., and the Los Angeles Gas & Electric Corporation as is not firmly contracted for by them, severally, in compliance with regulations of the Secretary on or before November 16, 1931, shall be taken and paid for by the company.

(e) The subdivision of said article fourteen (14) entitled "Of firm energy not hereinbefore disposed of" is hereby amended so as to read as follows, to wit:

It is further agreed that the United States reserves the right, in case the dam which it erects provides a maximum water surface elevation in excess of one thousand two hundred twenty-two (1,222) feet above sea level (U. S. Geological Survey datum), and thereby increases the quantity of firm energy above the quantity of four billion two hundred forty million (4,240,000,000) kilowatt-hours allocated above, to dispose of such increase, but not to exceed ninety million (90,000,000) kilowatt-hours per year (June 1 to May 31, inclusive), to any municipality or municipalities by firm contract executed with the Secretary on or before November 16, 1931. Such disposition shall be without prejudice to any provision of this lease or of the allocation above referred to. So much of such additional energy as is not so contracted for shall be taken and paid for by the city. Generation of such additional energy shall in any event be effected by the city.

CONTRACT AMENDED ONLY AS SPECIFICALLY PROVIDED

(8) Except as specifically amended hereby the said contract of April 26, 1930, amended as aforesaid, shall remain in full force and effect.

MEMBER OF CONGRESS CLAUSE

(9) No Member of or Delegate to Congress or Resident Commissioner shall be admitted to any share or part of this contract, or to any benefit that may arise therefrom. Nothing, however, herein contained shall be construed to extend to this contract if made with a corporation for its general benefit.

In witness whereof, the parties hereto have caused this supplemental contract to be executed the day and year first above written.

Attest:

THE UNITED STATES OF AMERICA,
By RAY LYMAN WILBUR, *Secretary of the Interior.*

THE CITY OF LOS ANGELES, acting by and through its Board of Water and Power Commissioners,
By ARTHUR STRASBURGER, *President.*

Attest:
JAS. P. VROMAN, *Secretary.*

DEPARTMENT OF WATER AND POWER OF THE CITY OF LOS ANGELES, by the Board of Water and Power Commissioners,
By ARTHUR STRASBURGER, *President.*

Attest:
JAS. P. VROMAN, *Secretary.*

SOUTHERN CALIFORNIA EDISON CO. (LTD.),
By JOHN B. MILLER, *Chairman.*

Attest:
CLIFTON PETERS, *Secretary.*

porations being organized and existing under the laws of the State of California, and hereinafter styled the lessees.[2]

Witnesseth:

EXPLANATORY RECITALS

(2) Whereas, for the purpose of controlling the floods, improving navigation, and regulating the flow of the Colorado River, providing for storage and for the delivery of the stored waters for reclamation of public lands and other beneficial uses exclusively within the United States, and for the generation of electrical energy, the Secretary, subject to the terms of the Colorado River compact, is authorized to construct, operate, and maintain a dam and incidental works in the main stream of the Colorado River at Black Canyon or Boulder Canyon, adequate to create a storage reservoir of a capacity of not less than twenty million acre-feet of water; also to construct, equip, operate, and maintain at or near said dam, or cause to be constructed, a complete plant and incidental structures suitable for the fullest economic development of electrical energy from the water discharged from said reservoir; and

(3) Whereas, after full consideration of the advantages of both the Black Canyon and Boulder Canyon dam sites, the Secretary has determined upon Black Canyon as the site of the aforesaid dam, hereinafter styled the Boulder Canyon Dam, and has determined that, the provision for revenues made by this contract, considering all of its provisions, including article sixteen (16), together with other contracts, in accordance with the provisions of the Boulder Canyon project act, is adequate in his judgment to insure payment of all expenses of operation and maintenance of the Boulder Canyon Dam and appurtenant works incurred by the United States, and the repayment within fifty (50) years from the date of completion of said works of all amounts advanced to the Colorado River Dam fund under Subdivision (b) of Section (2) of the Boulder Canyon Project Act, together with interest thereon made reimbursable under said act; and

(4) Whereas, the lessees are desirous severally of entering into contracts of lease of units of a Government-built electrical plant with right to generate electrical energy;

(5) Now, therefore, in consideration of the mutual covenants herein contained, the parties hereto agree as follows, to wit:

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[2] As amended May 28, 1930. This article, as of Apr. 26, 1930, read:

CONTRACT FOR LEASE OF POWER PRIVILEGE

(1) This contract, made this 26th day of April, nineteen hundred thirty, pursuant to the act of Congress approved June 17, 1902 (32 Stat. 388), and acts amendatory thereof or supplementary thereto, all of which acts are commonly known and referred to as the reclamation law, and particularly pursuant to the act of Congress approved December 21, 1928 (45 Stat. 1057), designated the Boulder Canyon project act, between the United States of America, hereinafter referred to as the United States, acting for this purpose by Ray Lyman Wilbur, Secretary of the Interior, hereinafter styled the Secretary, and, severally, the city of Los Angeles, a municipal corporation, hereinafter styled the city, acting for this purpose by its Board of Water and Power Commissioners, and Southern California Edison Co. (Ltd.), a private corporation, hereinafter styled the company, both of said corporations being organized and existing under the laws of the State of California, and hereinafter styled the lessees.

Witnesseth:

CONSTRUCTION BY UNITED STATES

(6) The United States will, at its own cost, construct in the main stream of the Colorado River at Black Canyon, a dam, creating thereby at the date of completion, a storage reservoir having a maximum water surface elevation at about twelve hundred twenty-two (1,222) feet above sea level (United States Geological Survey datum) of a capacity of about twenty-nine million five hundred thousand (29,500,000) acre-feet. The United States will also construct in connection therewith outlet works, pressure tunnels, penstocks, power-plant building, and furnish and install generating, transforming, and high-voltage switching equipment for the generation of the energy allocated to the various allottees respectively as stated in article fourteen (14) hereof.

OPERATION AND MAINTENANCE OF DAM

(7) The United States will operate and maintain the dam, reservoir, pressure tunnels, penstocks to but not inclusive of the shut-off valves at the inlets to the turbine casings, and outlet works, and will have full control of all water passing the dam for any and all purposes. The dam and reservoir will be operated and used: First, for river regulation, improvement of navigation, and flood control; second, for irrigation and domestic uses and satisfaction of present perfected rights in pursuance of Article VIII of the Colorado River compact; and, third, for power.

INSTALLATION OF MACHINERY

(8) The machinery and equipment for the generation of power will be provided and installed and owned by the United States. The city and the company shall each notify the Secretary of the Interior, in writing, within two (2) months after receipt of written notice from him that diversion of the Colorado River has been effected for the construction of Boulder Canyon Dam, as to their respective generating requirements in order that the United States may be able to determine the type and initial and maximum ultimate capacity of the generating equipment to be installed in the power plant. Generating units and other equipment to be installed by the United States shall be in sufficient number and of sufficient capacity to generate the energy allocated to and taken by the lessees and the various allottees, served by each lessee as stated in article fourteen (14) hereof, upon the load factors stated by the respective allottees with proper allowance for the combined load factors of all allottees served by each lessee. Each lessee shall give notice to the Secretary of the date at which it requires its generating equipment to be ready for operation, such notice to be given at least three years before said date. If a lesser number of generating units is initially installed, the United States will furnish and install, at a later date or from time to time on like terms, such additional units as with the original installation will generate the energy allocated. The city and the company shall each cooperate with the United States in the preparation of designs for the power plant, and in the preparation of plans and specifications for the machinery and equipment to be installed in connection therewith and required by each, respectively.

Each allottee (including lessees) shall have opportunity to be heard by the Secretary or his representatives upon the design, capacity, and cost of machinery before contracts therefor are let.

COMPENSATION FOR USE OF MACHINERY [3]

(9) (*a*) Compensation for the use, for the periods of lease thereof, of machinery and equipment furnished and installed by the United States, for each lessee respectively, for the generation of electrical energy, equal to the cost thereof, including interest charges at the rate of four per centum (4%) per annum, compounded annually from the date of advances to the Colorado River Dam fund for the purchase of such equipment and machinery to June 1 of the year next preceding the year when the initial installment becomes due under this article, shall be paid to the United States by the lessees, severally, in ten (10) equal annual installments, so as to amortize the total cost (including interest as fixed above), and interest thereafter upon the unpaid balance of such total cost at the rate of four per centum (4%) per annum. The first installment payable by each lessee shall be due on June 1 next following the date the machinery leased by such lessee is ready for operation and water is available therefor, as announced by the Secretary, and the subsequent nine (9) installments shall be paid on June 1 of each year thereafter.

(*b*) No charge shall be made against either lessee on account of cost of, or as compensation for the use of, machinery required to be installed in consequence of execution of a contract for electrical energy by a State pursuant to article fourteen (14) hereof, unless such machinery is to be used partially for the benefit of such lessee. In such event the charge made by the United States for compensation for the use thereof shall be adjusted between the State and such lessee as they may agree or if they fail to agree then by the Secretary.

LEASE OF POWER PLANT

(10) (*a*) The United States hereby leases to the city for fifty (50) years from the date at which energy is ready for delivery to the city,

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[3] As amended Sept. 28, 1931. This article as of Apr. 26, 1930, read:

COMPENSATION FOR USE OF MACHINERY

(9) (*a*) Compensation for the use, for the periods of lease thereof, of machinery and equipment furnished and installed by the United States, for each lessee, respectively, for the generation of electrical energy, equal to the cost thereof, including interest charges at the rate of four per centum (4%) per annum, compounded annually from the date of advances to the Colorado River Dam fund for the purchase of such equipment and machinery to June first of the year next preceding the year when the initial installment becomes due under this article, shall be paid to the United States by the lessees, severally, in ten (10) equal annual installments, so as to amortize the total cost (including interest as fixed above), and interest thereafter upon such total cost at the rate of four per centum (4%) per annum. The first installment payable by each lessee shall be due on June first next following the date the machinery leased by such lessee is ready for operation and water is available therefor, as announced by the Secretary, and the subsequent nine installments shall be paid on June first of each year thereafter.

(*b*) No charge shall be made against either lessee on account of cost of, or as compensation for the use of, machinery required to be installed in consequence of execution of a contract for electrical energy by a State pursuant to article fourteen (14) hereof, unless such machinery is to be used partially for the benefit of such lessee. In such event the charge made by the United States for compensation for the use thereof shall be adjusted between the State and such lessee as they may agree or if they fail to agree then by the Secretary.

as announced by the Secretary, in accordance with article eleven (11) hereof, such power-plant units and corresponding plant facilities and incidental structures as may be necessary to generate the energy allocated to it and energy for those allottees for whom the city is designated the generating agency, together with the right to generate such electrical energy.

(*b*) The United States hereby leases to the company such power-plant units and corresponding plant facilities and incidental structures as may be necessary to generate the energy allocated to it and energy for those allottees for whom the company is designated the generating agency, together with the right to generate such electrical energy, for a period beginning with the date at which the first of such power plant units is ready for operation and water is available therefor as announced by the Secretary, and ending at a time fifty (50) years from the date at which energy is ready for delivery to the city as provided in article eleven (11) (*a*) hereof.

(*c*) The machinery and equipment under lease to either lessee shall be operated and maintained by such lessee without interference from or control by the other lessee, but subject nevertheless to the supervisory authority of the Secretary or his representative, under the terms of the lease.

(*d*) Subject to conditions hereinafter stated, the designation of generating agencies shall be as follows:

Generation of energy allocated to and used by the States of Nevada and Arizona shall be effected by the city.

Generation of energy allocated to the municipalities, including those contracting under the provisions of the last paragraph of article fourteen (14), shall be effected by the city.

Generation of energy allocated to the district shall be effected by the city.

Generation of energy allocated to the companies shall be effected by Southern California Edison Co. (Ltd.).

Nevertheless, the foregoing provisions are subject to the following conditions:

(1) Should it prove of material economic advantage to the district to have a portion of its energy generated as off-peak energy, the city, after generating energy for the district to the full extent of the generating capacity which has been installed at the request of the district, with allowance for the contemplated margin of reserve capacity, shall also generate such additional energy as may be needed by the district and as can be generated off-peak with other generating capacity leased to and being operated by the city at such times as such use does not conflict with the needs of the city and other allottees for whom the city is generating energy. The district will pay for the off-peak use of such other generating capacity, together with an allowance for a fair proportion of the operation and maintenance expenses at rates to be agreed upon between the district and the city, and, if they are unable to agree, to be determined by the Secretary.

Should the amount of energy which can be obtained by the district, from the generating capacity which has been installed at the request of the district and from other capacity leased to and being operated by the city, be insufficient to satisfy the requirements of the district, then the district may arrange with the company for generation of

such off-peak energy as may be needed by the district at such times and not obtainable from the city, to such an extent as such generation does not conflict with the needs of the company and other allottees for whom the company is generating energy. Charge shall be made against the district for such service at the rate to be agreed upon between the district and the company, and if they are unable to agree then at a rate to be determined in accordance with article thirty-five (35) (*a*) hereof.

(II) Disputes and disagreements between any allottee and the lessee generating energy for it, with respect to such generation, and/or the cost thereof, shall be determined by the Secretary unless otherwise specifically provided in this contract.

(III) Except for off-peak power furnished the district, which shall be as provided in paragraph (I) of this article, all generation shall be effected at cost as determined in accordance with article twelve (12) hereof.

ASSUMPTION OF OPERATION OF POWER PLANT

(11) (*a*) Energy shall be ready for delivery to the city and to the municipalities, including those contracting under the last paragraph of article fourteen (14), when the Secretary announces that one billion two hundred fifty million (1,250,000,000) kilowatt-hours of energy per year is ready for delivery.

(*b*) Energy shall be ready for delivery to the district when the Secretary announces that two billion (2,000,000,000) kilowatt-hours of energy per year is available, which date, however, shall not be sooner than one (1) year after energy is ready for delivery to the city; provided, however, that the time when energy is ready for delivery to the district may be advanced, subject to the approval of the Secretary, should the district so request, and that in such case the city shall be compensated by the district for interest and depreciation on and maintenance and operation of its main transmission line in case the total energy available to the city is reduced below one billion two hundred fifty million (1,250,000,000) kilowatt-hours per annum, in the proportion that such kilowatt-hours available to the city is less than one billion two hundred fifty million (1,250,000,000).

(*c*) Energy shall be ready for delivery to the company when the Secretary announces that water capable of generating four billion two hundred forty million (4,240,000,000) kilowatt-hours of energy per year is available, which date, however, shall not be sooner than three (3) years after commencement of delivery of energy to the city and which shall not be until the water surface in Boulder Canyon reservoir on August 1 immediately preceding has reached an elevation of eleven hundred fifty (1,150) feet above sea level (United States Geological Survey datum); provided, however, that the Secretary may require the company to assume its obligations to take and/or pay for Boulder Canyon energy in accordance with the provisions of this contract on the first day of the calendar month next following the date when the company's system maximum demand in kilowatts is equal to or greater than it was at any time during the twelve-month period immediately preceding the date when the city commences to obtain energy from Boulder Canyon power plant. "Maximum demand," as used in the sentence next

preceding, shall be defined as the average of the five largest half-hourly peaks during any single month, after deducting therefrom the amount of kilowatts the company may be temporarily carrying for any purpose other than supplying its own normal load.

(*d*) Upon written notification from the Secretary that generating equipment is ready for operation by it as provided in subparagraphs (*a*), (*b*), and (*c*), respectively, of this article, and water is available for generating energy therefrom, each lessee shall assume the operation and maintenance of its respective portion of the power plant, and thereafter such lessee, severally, shall save the United States, its officers, agents, and employees harmless as to injury and damage to persons and property which may in any manner arise out of the operation and maintenance of the portion of such plant leased to it.

OPERATION AND MAINTENANCE OF POWER PLANT

(12) The respective portions of the power plant and appurtenant structures shall be operated and maintained by the city and the company, severally, under the supervision of a director appointed by the Secretary. The city and the company shall each be responsible for the operation and maintenance of that part of the power plant operated by it and shall bear the cost thereof as provided in article sixteen (16). The United States, in accordance with article ten (10) hereof, will pay each lessee in the form of credits upon the account of such lessee for amounts due the United States under this contract, the cost incurred by it in generating energy for other allottees for whom it is the designated generating agency, and will require such other allottees to repay such cost to the United States. Except as provided in article ten (10 *d* 1) hereof as to off-peak power, the term "cost," as used with reference to generating energy for other allottees, shall include a proper proportionate allowance for amortization of the amounts for which the respective lessees are obligated to the United States on account of use of machinery and equipment as provided in paragraph (*a*) of article nine (9) hereof and interest on the respective lessees' prepayments thereof; a proper proportionate part of any annuity set up in accordance with regulations of the Secretary provided for in subdivision 3 of article sixteen (16) hereof, and any additional expenditures made by the respective lessees with the approval of the Secretary, for the purpose of meeting the obligation of the lessees to make replacements; and a proper proportionate part of the actual outlay of the lessees for operating such machinery and equipment and keeping the same in repair, including reasonable overhead charges. The extent of the allowance for the several items and the system of accounting therefor shall be prescribed by the Secretary under uniform regulations to be promulgated by him in accordance with the Boulder Canyon project act. The United States will compensate each lessee for the generation by it of any secondary energy not taken by the district or the lessees but disposed of by the United States, such compensation to cover the pro rata cost thereof as defined in this article (in proportion to the total kilowatt-hours generated in that month by each lessee) during the time said secondary energy was generated. Such secondary energy will be disposed of by the United States subject only to the prior right thereto of the district and/or the lessees.

The director, among other powers, shall have authority to enforce rules and regulations promulgated by the Secretary in accordance with the Boulder Canyon project act, respecting operation and maintenance of the power plant and appurtenant works and structures, pursuant to article thirty-three (33) hereof.

Prior to the promulgation of any regulations, or the change or modification of regulations, the Secretary shall give any lessee and any allottee affected thereby an opportunity to be heard.

KEEPING LEASED PROPERTY IN REPAIR

(13) Except in case of emergency, no substantial change in any leased property shall be made by either lessee without first having had and obtained the written consent of the director or Secretary, and the Secretary's opinion as to whether any change in any leased property is or is not substantial shall be conclusive and binding upon the parties hereto. The lessees, severally, shall promptly make any and all repairs to and replacements of leased property (except those occasioned by act of God) in the control of each, respectively, which, in the opinion of the Secretary, are deemed necessary for the proper operation and maintenance of leased property. In case of neglect or failure of either lessee to make such repairs, the United States may, at its option, cause such repairs to be made and charge the actual cost thereof, plus fifteen per centum (15%) to cover overhead and general expense, to the lessee having control of such property, which amount, together with interest at the rate of four per centum (4%) per annum from the date of the expenditure to the date of payment will be paid to the United States by the lessee responsible for such repairs. The cost to the United States, with overhead and interest as stated above, of making any of the repairs contemplated by this contract, shall be repaid by the lessee having control of the property so repaired, on June 1 immediately succeeding the date of completion of such repairs.

ALLOCATION OF ENERGY [4]

(14) The Secretary reserves and as against the lessees may exercise the power in accordance with the provisions of this contract to contract with the other allottees named in this article for the furnishing

[4] As amended May 28, 1930, Sept. 23, 1931. This article, as of Apr. 26, 1930, read:

ALLOCATION OF ENERGY

(14) The Secretary reserves and as against the lessees may exercise the power in accordance with the provisions of this contract to contract with the other allottees named in this article for the furnishing of energy to such allottees at transmission voltage in accordance with the allocation to each such allottee and the Secretary is authorized by each lessee to enforce as against it the rights acquired by such other allottees under such contracts. Each lessee severally in accordance with the agency designations made in paragraph (*d*) of article ten (10), covenants to generate and furnish energy, at transmission voltage, needed to meet the following requirements of the allottees (other than lessees), named below, the allocations of firm energy being made in percentages of the total firm energy as defined in article fifteen (15) hereof, to be delivered to such allottees at said Boulder Dam power plant.

Of Firm Energy.

A. To the State of Nevada, for use in Nevada, not exceeding eighteen per centum (18%) of said total firm energy.

of energy to such allottees at transmission voltage in accordance with the allocation to each such allottee and the Secretary is authorized by each lessee to enforce as against it the rights acquired by such other allottees under such contracts. Each lessee severally, in accordance with the agency designations made in paragraph (*d*) of article ten (10), covenants to generate and furnish energy, at transmission voltage, needed to meet the following requirements of the allottees (other than lessees) named below, the allocations of firm energy being made in percentages of the total firm energy as defined in article fifteen (15) hereof, to be delivered to such allottees at said Boulder Dam power plant.

B. To the State of Arizona, for use in Arizona, not exceeding eighteen per centum (18%) of said total firm energy. Should either of the States not take its full eighteen per centum (18%) allocation within a period of twenty (20) years hereof, the other may then contract for the energy not so taken up to four per centum (4%) of the total firm energy, provided that the combined amount used by the two States shall not, at any time, exceed thirty-six per centum (36%) of such total firm energy.

C. To the Metropolitan Water District of Southern California so much energy as may be needed and used for pumping Colorado River water into and in its aqueduct for the use of such district within the following limits:

(1) Not exceeding thirty-six per centum (36%) of said total firm energy, plus

(2) All secondary energy developed at the Boulder Dam power plant as provided in article seventeen (17) hereof; plus

(3) So much of the firm energy allocated to the States, the city, and the company as may not be in use by them. Energy allocated to the States but not in use by them shall be released to the district by the two lessees equally (unless they agree upon a different ratio) as follows:

(*a*) If the district makes a firm contract with the Secretary for the balance of the lease period for part or all of such unused States' energy (subject to the first right of the States thereto) such contract shall be made effective upon two years' written notice to the Secretary, and compensation to the lessees, respectively, for main transmission line property rendered idle;

(*b*) If the district does not so make a firm contract for such energy, then energy allocated to the States but not in use by them, shall be released to the district upon not less than fifteen (15) months' written notice to the Secretary and at such compensation as the district and such lessees, respectively, may agree upon, to cover cost and overhead of replacing energy which otherwise would have been received at the Pacific coast end of the main transmission lines by the lessees, respectively. Such cost shall include interest on and depreciation and operation and maintenance of the plant capacity while required for the generation of such substitute energy; and also appropriate allowance for interest on and maintenance and depreciation of plant capacity rendered idle because of cessation of generation of such substitute energy until such time as such plant capacity would otherwise have been installed by the lessees, respectively, for their own requirements. If the district and the respective lessees fail to agree on such compensation, such energy shall nevertheless be released to the district, and the disagreement shall be determined in accordance with article thirty-five (35) (*a*) hereof. Such determination shall include allowance for items of cost, and overhead as specified in this paragraph. Pending such determination, energy so released shall be paid for by the district at the rate for firm energy but the determination of compensation under article thirty-five (35) (*a*) hereof shall not be controlled by such rate. During any year beginning June first, the district shall not use any secondary energy nor any unused State energy, until it has first used subsequent to June first, next preceding, an amount of firm energy equivalent to one-twelfth of the amount of firm energy it is obligated to take and/or pay for annually multiplied by the number of months elapsed since June first next preceding.

(4) If, due to temporary deficiency in secondary energy regularly used by the district, substitute energy is requested by the district in excess of the energy made available under the foregoing subparagraph (3) (*b*) the city and/or the company may release so much energy as may be practicable on the same terms as provided in subsection (3) (*b*) preceding.

D. To the municipalities of Anaheim, Beverly Hills, Burbank, Colton, Fullerton, Glendale, Newport Beach, Pasadena, Riverside, San Bernardino, and Santa

Of firm energy.

A. To the State of Nevada, for use in Nevada, not exceeding eighteen per centum (18%) of said total firm energy.

B. To the State of Arizona, for use in Arizona, not exceeding eighteen per centum (18%) of said total firm energy.

Should either of the States not take its full eighteen per centum (18%) allocation within a period of twenty (20) years hereof, the other may then contract for the energy not so taken up to four per centum (4%) of the total firm energy, provided that the combined amount used by the two States shall not, at any time, exceed thirty-six per centum (36%) of such total firm energy.

Ana (referred to herein as "the municipalities"), six per centum (6%) in all, to be allocated between them as they may agree; but if no agreement is submitted to the Secretary on or before April 15, 1931, the Secretary shall determine the allocation of each.

E. To the City of Los Angeles, thirteen per centum (13%).

F. To Southern California Edison Co. (Ltd.), the Southern Sierras Power Co., the San Diego Consolidated Gas & Electric Co., and the Los Angeles Gas & Electric Corporation, referred to herein as the companies, nine per centum (9%) in all, division whereof between the companies shall be made according to mutual agreement among them, if possible. If no such agreement is submitted to the Secretary on or before April 15, 1931, the Secretary shall determine the allocation of each.

The foregoing allocations are subject to the following conditions:

(I) So much of the energy allocated to the States (thirty-six per centum (36%) of the firm energy) and not in use by them, or failing their use, by the district for the above purposes, shall be taken and paid for one-half by the city and one-half by the company.

(II) All of the energy allocated to the municipalities may be contracted for in compliance with regulations of the Secretary, by any one or more of them, as they may agree, on or before April 15, 1931. So much of the energy allocated to the municipalities as is not so contracted for, or, if contracted for, not used by them directly or under contract for municipal purposes and/or distribution to their inhabitants shall be taken and paid for by the city.

(III) So much of the energy allocated to the Southern Sierras Power Co., the San Diego Consolidated Gas & Electric Co., and the Los Angeles Gas & Electric Corporation as is not firmly contracted for by them, severally, in compliance with regulations of the Secretary on or before April 15, 1931, shall be taken and paid for by the company.

(IV) If any allottee is permitted by the United States to divert water from the reservoir at a time when the reservoir is not spilling, in consequence of which the amount of energy, which would have been utilized is diminished, such diminution shall be debited to the allocation of firm energy herein made to such allottee; and charge for the energy equivalent of such diversion shall be made, and the amount of energy which the allottee shall otherwise be obligated to take and pay for hereunder shall be correspondingly reduced. The reservoir shall be considered as spilling whenever water is being discharged in excess of the amount used for the generation of power, whether such waste occurs over the spillway or otherwise.

(V) Each of the States of Arizona and Nevada may, from time to time within the period of this lease, contract for energy for use within such State in any amount until the total allocated, respectively, to each is in use as provided above; and may terminate such contract, or contracts, without prejudice to the right to again contract for such energy. All such contracts shall be executed with the Secretary. A contract requiring one thousand (1,000) horsepower (of maximum demand) or less may become effective or be terminated on six months' written notice of requirement or termination given the director by the State: *Provided,* That the notice given shall be two years if in the twelve months preceding said notice of demand the total increment to such State has exceeded five thousand (5,000) horsepower of maximum demand or if in the twelve months preceding said notice of termination the decrement to such State has exceeded five thousand (5,000) horsepower of maximum demand. In all cases the director shall immediately transmit such notice to each lessee. Whenever the amount in use is in excess of five thousand (5,000) horsepower of maximum demand, the lessees, respectively, shall be compensated for property rendered idle by use of such excess in such amount as the Secretary shall determine to be equitable.

C. To the Metropolitan Water District of Southern California for pumping Colorado River water into and in its aqueduct for the use of such district within the following limits:

(1) Thirty-six per centum (36%) of said total firm energy; plus

(2) All secondary energy developed at the Boulder Dam power plant as provided in article seventeen (17) hereof; plus

(3) So much of the firm energy allocated to the States, the city, and the company as may not be in use by them. Energy allocated to the States but not in use by them shall be released to the district by the two lessees equally (unless they agree upon a different ratio) as follows:

(*a*) If the district makes a firm contract with the Secretary for the balance of the lease period for part or all of such unused States' energy (subject to the first right of the

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Firm energy not contracted for by the States shall be available for use by the district as herein elsewhere provided, and if not in use by the States and/or the district, shall be taken and paid for equally by the two lessees. No right which may be available to a State under section five (5) (*c*) of the Boulder Canyon project act to execute a firm contract for electrical energy for use within the State shall be impaired by any provision of this lease; but if contract thereunder be executed with the Secretary no provision of this lease shall apply for the benefit of such State. If in consequence of execution of such contract the Secretary requires the allocation to either lessee or to an allottee using such lessee's main transmission lines to be diminished, such lessee may terminate its rights and obligations hereunder within two months thereafter on written notice to the Secretary: *Provided further,* That the combined allocation of nineteen per centum (19%) as herein made to the city and the municipalities shall not be reduced because of any such firm contract with a State for energy.

Of secondary energy.

The district shall have the right to purchase and use all secondary energy as provided in article fifteen (15) and article seventeen (17) hereof for the purposes stated in the first paragraph of subdivision (*c*) of this article. The city and the company shall each have the right to purchase and use one-half of all secondary energy not used by the district. Any such energy not used by one lessee shall be available, for the time being, to the other. If secondary energy is not taken by the city, the district, and/or the company, then and in such event, the United States reserves the right to take, use, and dispose of such energy, from time to time, as it sees fit, giving credit therefor as provided in article twelve (12) hereof.

Of firm energy allocated to but not used by the district.

In the event the district shall fail for any reason to use all or any of the firm energy herein allotted to it for the only purpose for which said firm energy is allotted to it, that is, for pumping water into and in its aqueduct, then no disposition shall be made of such firm energy by the Secretary without first giving to a successor to the district which may undertake to build or maintain a Colorado River aqueduct the opportunity to take said firm energy for the same purpose and under the same terms as those to which the district was obligated.

In the event no such successor takes said firm energy as provided above, then no disposition of such firm energy shall be made by the Secretary without first giving to each lessee the opportunity to contract on equal terms and conditions, to be prescribed by the Secretary, for one-half of such energy, together with such portion of the remainder as the other lessee shall not elect to take.

Of firm energy not disposed of under the foregoing allocations.

The United States reserves the right, in case the dam which it erects provides a maximum water surface elevation in excess of one thousand two hundred twenty-two (1,222) feet above sea level (U. S. Geological Survey datum), and thereby increases the quantity of firm energy above the quantity of four billion two hundred forty million (4,240,000,000) kilowatt-hours allocated above, to dispose of such increase, but not to exceed ninety million (90,000,000) kilowatt-hours per year (June 1 to May 31, inclusive), to any municipality or municipalities by firm contract executed with the Secretary on or before April 15, 1931. Such disposition shall be without prejudice to any provision of this lease or of the allocation above referred to. So much of such additional energy as is not so contracted for shall be taken and paid for by the city. Generation of such additional energy shall in any event be effected by the city.

States thereto), such contract shall be made effective upon two years' written notice to the Secretary, and compensation to the lessees, respectively, for main transmission line property rendered idle;

(*b*) If the district does not so make a firm contract for such energy, then energy allocated to the States, but not in use by them, shall be released to the district upon not less than fifteen (15) months' written notice to the Secretary and at such compensation as the district and such lessees, respectively, may agree upon to cover cost and overhead of replacing energy which otherwise would have been received at the Pacific coast end of the main transmission lines by the lessees, respectively. Such cost shall include interest on and depreciation and operation and maintenance of the plant capacity while required for the generation of such substitute energy; and also appropriate allowance for interest on and maintenance and depreciation of plant capacity rendered idle because of cessation of generation of such substitute energy until such time as such plant capacity would otherwise have been installed by the lessees, respectively, for their own requirements. If the district and the respective lessees fail to agree on such compensation, such energy shall nevertheless be released to the district, and the disagreement shall be determined in accordance with article thirty-five (35) (*a*) hereof. Such determination shall include allowance for items of cost and overhead as specified in this paragraph. Pending such determination, energy so released shall be paid for by the district at the rate for firm energy, but the determination of compensation under article thirty-five (35) (*a*) hereof shall not be controlled by such rate.

During any year beginning June 1, the district shall not use any secondary energy nor any unused State energy until it has first used subsequent to June 1 next preceding an amount of firm energy equivalent to one-twelfth of the amount of firm energy it is obligated to take and/or pay for annually multiplied by the number of months elapsed since June 1 next preceding.

(4) If, due to temporary deficiency in secondary energy regularly used by the district, substitute energy is requested by the district in excess of the energy made available under the foregoing subparagraph (3) (*b*), the city and/or the company may release so much energy as may be practicable on the same terms as provided in subsection (3) (*b*) preceding.

D. To the municipalities of Anaheim, Beverly Hills, Burbank, Colton, Fullerton, Glendale, Newport Beach, Pasadena, Riverside, San Bernardino, and Santa Ana (referred to herein as "the municipalities"), six per centum (6%) in all, to be allocated between them as they may agree; but if no agreement is submitted to the Secretary on or before November 16, 1931, the Secretary shall determine the allocation of each.

E. To the City of Los Angeles, thirteen per centum (13%).

F. To Southern California Edison Co. (Ltd.), the Southern Sierras Power Co., the San Diego Consolidated Gas & Electric Co., and the Los Angeles Gas & Electric Corporation, referred to herein as the companies, nine per centum (9%) in all, division whereof between the companies shall be made according to mutual agreement among them, if possible. If no such agreement is submitted to the Secretary on or before November 16, 1931, the Secretary shall determine the allocation of each.

It is further agreed that—

(I) So much of the energy allocated to the States (thirty-six per centum (36%) of the firm energy) and not in use by them, or failing their use, by the district for the above purposes, shall be taken and paid for one-half by the city and one-half by the company.

In addition, all firm energy allocated to the city (thirteen per centum (13%)) shall be taken and paid for by the city.

(II) All of the energy allocated to the municipalities may be contracted for in compliance with regulations of the Secretary, by any one or more of them, as they may agree, on or before November 16, 1931. So much of the energy allocated to the municipalities as is not so contracted for, or, if contracted for, not used by them directly or under contract for municipal purposes and/or distribution to their inhabitants, shall be taken and paid for by the city.

(III) So much of the energy allocated to the Southern Sierras Power Co., the San Diego Consolidated Gas & Electric Co., and the Los Angeles Gas & Electric Corporation as is not firmly contracted for by them, severally, in compliance with regulations of the Secretary on or before November 16, 1931, shall be taken and paid for by the company.

(IV) If any allottee is permitted by the United States to divert water from the reservoir at a time when the reservoir is not spilling, in consequence of which the amount of energy which would have been utilized is diminished, such diminution shall be debited to the allocation of firm energy herein made to such allottee; and charge for the energy equivalent of such diversion shall be made, and the amount of energy which the allottee shall otherwise be obligated to take and pay for hereunder shall be correspondingly reduced.

The reservoir shall be considered as spilling whenever water is being discharged in excess of the amount used for the generation of power, whether such waste occurs over the spillway or otherwise.

(V) Each of the States of Arizona and Nevada may, from time to time within the period of this lease, contract for energy for use within such State in any amount until the total allocated, respectively, to each is in use as provided above; and may terminate such contract, or contracts, without prejudice to the right to again contract for such energy. All such contracts shall be executed with the Secretary. A contract requiring one thousand (1,000) horsepower (of maximum demand) or less may become effective or be terminated on six months' written notice of requirement of termination given the director by the State; provided, that the notice given shall be two years if in the twelve months preceding said notice of demand the total increment to such States has exceeded five thousand (5,000) horsepower of maximum demand or if in the twelve months preceding said notice of termination the decrement to such State has exceeded five thousand (5,000) horsepower of maximum demand. In all cases

the director shall immediately transmit such notice to each lessee. Whenever the amount in use is in excess of five thousand (5,000) horsepower of maximum demand, the lessees, respectively, shall be compensated for property rendered idle by use of such excess in such amount as the Secretary shall determine to be equitable. Firm energy not contracted for by the States shall be available for use by the district as herein elsewhere provided, and if not in use by the States and/or the district, shall be taken and paid for equally by the two lessees. No right which may be available to a State under section five (5) (*c*) of the Boulder Canyon project act to execute a firm contract for electrical energy for use within the State shall be impaired by any provision of this lease; but if contract thereunder be executed with the Secretary no provision of this lease shall apply for the benefit of such State. If in consequence of execution of such contract the Secretary requires the allocation to either lessee or to an allottee using such lessee's main transmission lines to be diminished, such lessee may terminate its rights and obligations hereunder within two months thereafter on written notice to the Secretary. Provided, further, that the combined allocation of nineteen per centum (19%) as herein made to the city and the municipalities shall not be reduced because of any such firm contract with a State for energy.

Of secondary energy.

It is further agreed that the district shall have the right to purchase and use all secondary energy as provided in article fifteen (15) and article seventeen (17) hereof for the purposes stated in the first paragraph of subdivision (*c*) of this article. The city and the company shall each have the right to purchase and use one-half of all secondary energy not used by the district. Any such energy not used by one lessee shall be available, for the time being, to the other. If secondary energy is not taken by the city, the district, and/or the company, then and in such event, the United States reserves the right to take, use, and dispose of such energy, from time to time, as it sees fit, giving credit therefor as provided in article twelve (12) hereof.

Of firm energy allocated to, but not used by the district.

It is further agreed that in the event the district shall fail for any reason to use all or any of the firm energy herein allotted to it for the only purpose for which said firm energy is allotted to it, that is, for pumping water into and in its aqueduct, then the Secretary shall dispose of such unused energy until required by the district for said purpose, crediting on the district's obligation the proceeds of such disposition as received; provided, however, that no disposition of such firm energy shall be made by the Secretary without first giving to a successor to the district which may undertake to build or maintain a Colorado River Aqueduct the opportunity to take said firm energy for the same purpose and under the same terms as those to which the district was obligated; and provided, further, that in the event no such successor takes said firm energy as provided above, then no disposition of such firm energy shall be made by the Secretary without first giving to each lessee the opportunity to contract on equal terms and conditions, to be prescribed by the Secretary, for one-half of such energy, together with such portion of the remainder as the other lessee shall not elect to take.

Of firm energy not hereinbefore disposed of.

It is further agreed that the United States reserves the right, in case the dam which it erects provides a maximum water surface elevation in excess of one thousand two hundred twenty-two (1,222) feet above sea level (United States Geological Survey datum), and thereby increases the quantity of firm energy above the quantity of four billion two hundered forty million (4,240,000,000) kilowatt-hours allocated above, to dispose of such increase, but not to exceed ninety million (90,000,000) kilowatt-hours per year (June 1 to May 31, inclusive), to any municipality or municipalities by firm contract executed with the Secretary on or before November 16, 1931. Such disposition shall be without prejudice to any provsion of this lease or of the allocation above referred to. So much of such additional energy as is not so contracted for shall be taken and paid for by the city. Generation of such additional energy shall in any event be effected by the city.

FIRM AND SECONDARY ENERGY DEFINED

(15) The amount of firm energy for the first year of operation (June 1 to May 31, inclusive), following the date of the completion of the dam as announced by the Secretary shall be defined as being four billion two hundred forty million (4,240,000,000) kilowatt-hours at transmission voltage. For every subsequent year the amount defined as firm energy shall be decreased by eight million seven hundred sixty thousand (8,760,000) kilowatt-hours from that of the previous year.

Nevertheless, if it be determined by the Secretary that the rate of decrease of kilowatt-hours per year as above stated, is not in accord with actual conditions, the Secretary reserves the right to fix a lesser rate for any year (June 1 to May 31, inclusive), in advance.

If, by reason of international obligations arising through treaty or otherwise subsequent to the effective date of this contract, or by reason of interference with the program of construction and/or operation of the dam as provided for and contemplated by this contract, or by reason of other contingencies not now foreseen, the amount of firm energy available through the release of water from the Boulder Canyon reservoir shall in fact be less than the amount of firm energy as above defined, then in any such event the obligation of the lessee to take and/or generate shall be reduced in an amount corresponding to such change. If for any reason the United States shall be wholly unable to fulfill its obligations hereunder in respect of the delivery of water, then the lessees, or either of them, may terminate this contract insofar as it affects such lessees or lessee.

If the dam erected by the United States provides a maximum water surface elevation in excess of twelve hundred twenty-two (1,222) feet above sea level (United States Geological Survey datum), the United States reserves the right to dispose of additional firm energy thereby made available, not to exceed ninety million (90,000,000) kilowatt-hours per year, subject to pro rata of the eight million seven hundred sixty thousand (8,760,000) kilowatt-hours annual diminution above provided for.

The term "secondary energy" wherever used herein shall mean all electrical energy generated in one year (June 1 to May 31, inclusive), in excess of the amount of firm energy as hereinabove defined, available in such year.

The right of the district and/or lessee to take and pay for energy at the rate for secondary energy after discharge of such party's obligation to the United States to pay for energy at the rate for firm energy, shall not be impaired by reason of the fact that another allottee has not discharged its obligation to pay for energy at the rate for firm energy.

SCHEDULE OF RATES

(16) In consideration of this lease, the lessees severally agree: (1) To pay the United States for the use of falling water for the generation of energy for their own use, respectively, by the equipment leased hereunder (except as otherwise provided in article seventeen (17) hereof), as follows:

(*a*) One and sixty-three hundredths mills ($0.00163) per kilowatt-hour (delivered at transmission voltage) for firm energy;

(*b*) One-half mill ($0.0005) per kilowatt-hour (delivered at transmission voltage) for secondary energy;

(2) To compensate the United States for the use of the said leased equipment as herein elsewhere provided; and

(3) To maintain said equipment in first-class operating condition, including repairs to and replacements of machinery; provided, however, that, if the expenditures for replacements shall exceed at any time the sum accumulated by the lessees as a depreciation reserve in accordance with rules and regulations prescribed by the Secretary, pursuant to the Boulder Canyon project act, less all amounts previously withdrawn for replacements, then the rates aforesaid shall be readjusted as hereinafter provided so as to reimburse the said lessees severally for such excess expenditures within the term of this lease.

At the end of fifteen (15) years from the date of execution of this contract and every ten (10) years thereafter, the above rates of payment for firm and secondary energy shall be readjusted upon demand of any party hereto, either upward or downward as to price, as the Secretary may find to be justified by competitive conditions at distributing points or competitive centers.

The rate for falling water for generation of firm energy which shall be uniform for both lessees provided for by any such readjustment shall be arrived at by deducting from the price of electrical energy justified by competitive conditions at distributing points or competitive centers—(1) all fixed and operating costs as provided for in this contract of transmission to such points; (2) all fixed and operating costs of such portion of the power plant machinery as is to be operated and maintained by the several lessees, including the cost of repairs and replacements, together with such readjustments as to replacements as is provided for in paragraph three (3) in this article; it being understood that such readjusted rates shall under no circumstances exceed the value of said energy, based upon competitive conditions at distributing points or competitive centers.

In arriving at the respective rates for "firm energy" and "secondary energy" as fixed herein, recognition has been given to the fact that "secondary energy" can not be relied upon as being at all times available, but is subject to diminution or temporary exhaustion; whereas "firm energy" is the amount of energy agreed upon as being available continuously as required during each year of the contract period. In

the readjustment of the rate for "secondary energy," account shall be taken of the foregoing factors.

If the lessees severally or either of them shall not obtain a renewal of this contract at the expiration of the contract period as provided in article twenty-six (26) hereof, equitable adjustment for major replacements of machinery made between the date of the last readjustment of rates as provided for herein and the end of the contract period shall be made at the expiration of the contract.

MINIMUM ANNUAL PAYMENT [5]

(17) The minimum quantity of firm energy which the city shall take and/or pay for each year (June 1 to May 31, inclusive), under the terms of this contract and after same is ready for delivery to the city as provided in subdivision (*a*) of article eleven (11) hereof, shall be thirty-seven per centum (37%) of all firm energy as defined in article fifteen (15) hereof for the generation of which the United States makes water available in said year, except as reduced by amounts of firm energy contracted for by others as provided in article fourteen (14). In addition, the city agrees to take and pay for, as provided in the last paragraph of article fourteen (14) hereof, all firm energy (not to exceed ninety million (90,000,000)) kilowatt-hours per year (June 1 to May 31, inclusive), made available over and above the firm energy defined in article fifteen (15) hereof by the erection of a dam which provides a maximum water surface elevation in excess of one thousand two hundred and twenty-two (1,222) feet above sea level (United States Geological Survey data).

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[5] As amended May 28, 1930. This article, as of Apr. 26, 1930, read:

MINIMUM ANNUAL PAYMENT

(17) The total payments made by each lessee for firm energy available in any year (June 1 to May 31, inclusive), whether any energy is generated or not, exclusive of its payments for use of machinery, shall be not less than the number of kilowatt-hours of firm energy available to said lessee and which said lessee is obligated to take and/or pay for during said year, multiplied by one and sixty-three hundredths mills ($0.00163), or multiplied by the adjusted rate of payment for firm energy in case the said rate is adjusted as provided in article sixteen (16) hereof, less credits on account of charges to other allottees, as provided for and referred to in article twelve (12) hereof. For a fractional year at the beginning or end of the contract period, the minimum annual payment for firm energy shall be proportionately adjusted in the ratio that the number of days water is available for generation of energy in such fractional year bears to three hundred sixty-five (365). Provided, however, that in order to afford a reasonable time for the respective lessees to absorb the energy contracted for, the minimum annual payments by each for the first three (3) years after energy is ready for delivery to such lessees, respectively, as announced by the Secretary, shall be as follows, in percentages of the ultimate annual obligation, to take and/or pay for firm energy:

	Per cent
First year	55
Second year	70
Third year	85
Fourth year and all subsequent years	100

During said absorption period, if the quantity of energy taken in any one year (June 1 to May 31, inclusive), is in excess of the above percentages of the ultimate obligation during such year to take and/or pay for firm energy, such excess shall be paid for at the rate for secondary energy. Provided further, that the minimum annual payment shall be reduced in case of interruptions or curtailment of delivery of water as provided in article twenty-one (21) hereof.

The minimum quantity of firm energy which Southern Califronia Edison Co. (Ltd.) shall take and/or pay for each year (June 1 to May 31, inclusive), under the terms of this contract and after same is ready for delivery to the company as provided in subdivision (*c*) of article eleven (11) hereof, shall be twenty-seven per centum (27%) of all firm energy as defined in article fifteen (15) hereof for the generation of which the United States makes water available in said year, except as reduced by amounts of firm energy contracted for by others as provided in article fourteen (14).

The total payments made by each lessee for firm energy available in any year (June 1 to May 31, inclusive), whether any energy is generated or not, exclusive of its payments for use of machinery, shall be not less than the number of kilowatt-hours of firm energy available to said lessee and which said lessee is obligated to take and/or pay for during said year, multiplied by one and sixty-three hundredths mills ($0.00163), or multiplied by the adjusted rate of payment for firm energy in case the said rate is adjusted as provided in article sixteen (16) hereof, less credits on account of charges to other allottees, as provided for and referred to in article twelve (12) hereof. For a fractional year at the beginning or end of the contract period, the minimum annual payment for firm energy shall be proportionately adjusted in the ratio that the number of days water is available for generation of energy in such fractional year bears to three hundred sixty-five (365). Provided, however, that in order to afford a reasonable time for the respective lessees to absorb the energy contracted for, the minimum annual payments by each for the first three (3) years after energy is ready for delivery to such lessees, respectively, as announced by the Secretary, as herein elsewhere provided, shall be as follows, in percentages of the ultimate annual obligation, to take and/or pay for firm energy:

	Per cent
First year	55
Second year	70
Third year	85
Fourth year and all subsequent years	100

During said absorption period, if the quantity of energy taken in any one year (June 1 to May 31, inclusive), is in excess of the above percentages of the ultimate obligation during such year to take and/or pay for firm energy, such excess shall be paid for at the rate for secondary energy. Provided, further, that the minimum annual payment shall be reduced in case of interruptions or curtailment of delivery of water as provided in article twenty-one (21) hereof.

MONTHLY PAYMENTS AND PENALTIES

(18) The lessees, severally, shall pay monthly for energy in accordance with the rates established or provided for herein. When energy taken in any month is not in excess of one-twelfth (1/12) of the minimum annual obligation, bill for such month shall be computed at the rate for firm energy in effect when such energy was taken on the basis of the actual amount of energy used during such month. All energy used during any month in excess of one-twelfth (1/12) of the minimum annual obligation shall be paid for at the rate for secondary energy in effect when such energy was taken; provided, however, that the secondary rate shall not apply to any energy taken during any month

unless and until an amount of energy equivalent to one-twelfth (1/12) of the minimum annual obligation has been taken for all months, beginning with the month of June immediately preceding; provided, however, that the bill for the month of May shall not be less than the difference between the minimum annual payment, as provided in article seventeen (17) hereof, and the sum of the amounts charged for firm energy during the preceding eleven (11) months. The United States will submit bills to the lessees by the fifth of each month immediately following the month during which the energy is generated, and payments shall be due on the first day of the month immediately succeeding. If such charges (less credit allowances due lessees) are not paid when due, a penalty of one per centum (1%) of the amount unpaid shall be added thereto, and thereafter an additional penalty of one per centum (1%) of the amount unpaid shall be added on the first day of each calendar month thereafter during such delinquency.

NO ENERGY TO BE DELIVERED WITHOUT PAYMENT

(19) After notice by the Secretary to the lessees no electrical energy shall be generated for, or delivered to, any lessee who shall be in arrears for more than twelve (12) months in the payment of any charge and/or penalty due or to become due the United States hereunder. Each lessee shall, upon receipt of written notice from the Secretary that any allottee is in arrears in the payment of any such charge and/or penalty, immediately discontinue the generation for or delivery of energy to such allottee until receipt of further notice from said Secretary.

CONTRACT MAY BE TERMINATED IN CASE OF BREACH

(20) In case of the breach by a lessee of the terms and conditions of this agreement to the extent that another allottee is deprived of all or any part of the electrical energy to which it is entitled under the allocation set forth in article fourteen (14) hereof, the generation of which is to be effected by such lessee, or in case either lessee shall be in arrears for more than twelve (12) months in the payment of any charge and/or penalty due or to become due the United States hereunder, the Secretary reserves the right to immediately enter, take possession of, and operate and maintain at the cost of such lessee, with proper deduction for charges as provided in this contract, due from the party or parties to whom such energy is delivered, so much property leased to such lessee, as may be necessary to deliver energy to such allottee, and thereafter upon two (2) years' written notice to such lessee, to terminate this contract as to such lessee; and upon such termination hereof all leased property shall be returned and delivered up to the United States in as good condition as when received, reasonable wear and damage by the elements excepted; provided, however, that in event of such termination, a lessee shall have the right at any time within ten (10) years from date of first default or breach for which such termination is demanded to become reinstated hereunder by removing all causes which resulted in termination hereof, including payment of penalties, if any, and payment to the United States also of any and all loss incurred by it by reason of such termination. The waiver of a breach of any of the provisions of this contract shall not be deemed to be a waiver of any other provision hereof, or of a subsequent breach of such provision.

INTERRUPTIONS IN DELIVERY OF WATER

(21) The United States will deliver water continuously to each lessee in the quantity, in the manner, and at the times necessary for the generation of the energy which each of said lessees has the right and/or obligation to generate under this contract in accordance with the load requirements of each of said lessees and of allottees for which the respective lessees are generating agencies, excepting only that such delivery shall be regulated so as not to interfere with the necessary use of said Boulder Canyon Dam and Reservoir for river regulation, improvement of navigation, flood control, irrigation, or domestic uses, and the satisfaction of present perfected rights in or to the waters of the Colorado River, or its tributaries, in pursuance of Article VIII of the Colorado River compact, and this contract is made upon the express condition, and with the express covenant, that the several rights of the lessees to the waters of the Colorado River, or its tributaries, are subject to, and controlled by the Colorado River compact. The United States reserves the right temporarily to discontinue or reduce the delivery of water for the generation of energy at any time for the purpose of maintenance, repairs and/or replacements, or installation of equipment, and for investigations and inspections necessary thereto; provided, however, that the United States shall except in case of emergency give to the lessees reasonable notice in advance of such temporary discontinuance or reduction, and that the United States shall make such inspections and perform such maintenance and repair work after consultation with the lessees at such times and in such manner as will cause the least inconvenience to the lessees, and shall prosecute such work with diligence, and, without unnecessary delay, will resume delivery of water so discontinued or reduced. Should the delivery of water be discontinued or reduced below the amount required, severally, for the normal generation of firm energy for the payment of which said lessee has hereby obligated itself, the total number of hours of such discontinuance or reduction in any year shall be determined by taking the sum of the number of hours during which the delivery of water is totally discontinued, and the product of the number of hours during which the delivery of water is partially reduced and the percentage of said partial reduction below the actual quantity of water required by the lessees, severally, for the normal generation of firm energy. Total or partial reductions in delivery of water which do not reduce the power output below the amount required at the time by such lessee for the normal generation of firm energy, will not be considered in determining the total hours of discontinuance in any year. The minimum annual payment specified in article seventeen (17) hereof shall be reduced by the ratio that the total number of hours of such discontinuance bears to eight thousand seven hundred sixty (8,760). In no event shall any liability accrue against the United States, its officers, agents, and/or employees, for any damage, direct or indirect, arising on account of drought, hostile diversion, act of God, or of the public enemy, or other similar cause; nevertheless interruptions in delivery of water occasioned by such causes shall be governed as hereinabove provided in this article.

MEASUREMENT OF ENERGY

(22) All energy shall be measured at generator voltage and suitable metering equipment shall be provided and installed by the United States for this purpose. Suitable correction shall be made in the amounts of energy as measured at generator voltage to cover step-up transformer losses and energy required for operation of station auxiliaries, in determining the amounts of energy delivered at transmission voltage as provided in this contract. The said meter equipment shall be maintained by and at the expense of the respective lessees. Meters shall be tested at any reasonable time upon the request of either the United States or a lessee, and in any event they shall be tested at least once each year. If the test discloses that the error of any meter exceeds one per centum (1%), such meter shall be adjusted so that the error does not exceed one-half of one per centum (½%). Meter equipment shall be tested by means of suitable testing equipment which will be provided by the United States, and which shall be calibrated by the United States Bureau of Standards as often as requested by any party hereto. Meters shall be kept sealed, and the seals shall be broken only in the presence of representatives of both the United States and the lessees, respectively, and likewise all test of meter equipment shall be conducted only when representatives of both the United States and the respective lessees are present.

RECORD OF ELECTRICAL ENERGY GENERATED

(23) Each lessee shall make full and complete written monthly reports as directed by the Secretary, on forms to be supplied by the United States, of all electrical energy generated by it, and the disposition thereof to allottees. Such reports shall be made and delivered to the director on the third day of the month immediately succeeding the month in which the electrical energy is generated, and the records and data from which such reports are made shall be accessible to the United States on demand of the Secretary.

INSPECTION BY THE UNITED STATES

(24) The Secretary, or his representatives, shall at all times have the right of ingress to and egress from all works of the lessees for the purpose of inspection, repairs, and maintenance of works of the United States, and for all other proper purposes. The Secretary or his representatives shall also have free access at all reasonable times to the books and records of the lessees relating to the generation, transmission, and disposal of electrical energy hereunder with the right at any time during office hours to make copies of or from the same.

TRANSMISSION

(25) (*a*) The city shall operate and maintain at cost, including allowance for necessary overhead expense, the lines required for transmitting all Boulder Canyon power from the power plant to the pumping plants of the district, allocated to and used by the district for pumping water into and in its aqueduct; provided, that in the event it should prove materially to the advantage of the district, at any time during the 50-year period of this several lease, the district may operate and maintain such transmission lines itself; and provided

further, that in the event of disagreement or dispute between the district and the city as to such matter, such disagreement shall be determined as provided in article thirty-five (35) (*a*) hereof; and if by such determination energy allocated to and used by the district is to be transmitted by the district instead of the city, the Secretary will cause delivery of energy at transmission voltage to be made accordingly.

(*b*) The City of Los Angeles shall transmit over its main transmission line constructed for carrying Boulder Canyon power all such power allocated to and used by each of the municipalities, severally, and be compensated therefor on the basis of a reasonable share of the cost of construction, operation, and maintenance of such line; subject to the understanding that, if on further investigation before April 15, 1932, it shall prove to be materially more economical for any municipality to make a different arrangement respecting transmission of its power, it may do so, provided that the arrangement so made shall not reduce the quantity of energy transmitted by the city below nineteen per centum (19%) of the firm energy generated, and subject to the further understanding that in case of any disagreement over the question of cost of transmission of Boulder Canyon power, such disagreement shall be determined in accordance with article thirty-five (35) (*a*) hereof.

(*c*) The company shall transmit over its main transmission lines, constructed for carrying Boulder Canyon power, such power, allocated to and used by the Southern Sierras Power Co., the San Diego Consolidated Gas & Electric Co., and the Los Angeles Gas & Electric Corporation, as they may desire to have transmitted over such lines, and the company shall be compensated therefor as may be mutually agreed upon between the company and the agency whose power is transmitted over the company's lines. In case of any disagreement over the question of cost of transmission of Boulder Canyon power, such disagreement shall be determined in accordance with article thirty-five (35) (*a*) hereof.

DURATION OF CONTRACT

(26) This contract shall become effective as soon as the first act of Congress appropriating funds for commencement of construction of Boulder Canyon Dam has become law, and as to each lessee shall remain in effect until the expiration of a period of fifty (50) years from the date at which energy is ready for delivery to the city, as announced by the Secretary. The holder of any contract for electrical energy (including the lessees severally), not in default thereunder, shall be entitled to a renewal thereof upon such terms and conditions as may be authorized or required under the then existing laws and regulations, unless the property of such holder dependent for its usefulness on a continuation of the contract be purchased or acquired and such contractor be compensated for damages to its property, used and useful in the transmission and distribution of such electrical energy and not taken, resulting from the termination of the supply.

TITLE TO REMAIN IN UNITED STATES

(27) As provided by section six (6) of the Boulder Canyon project act, the title to Boulder Canyon Dam, reservoir, plant, and incidental works, shall forever remain in the United States.

ELECTRICAL ENERGY RESERVED FOR UNITED STATES

(28) Each lessee by means of machinery leased hereunder shall furnish to the United States such electrical energy as may be desired at a maximum demand not to exceed five thousand (5,000) kilowatts for construction and/or operation and maintenance purposes, and for diversion of water for irrigation and domestic uses, but not for resale to other than officers and employees and construction contractors of the United States, and to other persons in construction operating camps constructed and/or maintained by the United States. Such power shall be delivered to the United States at the power plant, and shall be measured at the point of delivery by meters furnished and installed by the United States. The United States will pay each lessee for such power, through credit on monthly bills, at cost as provided in article twelve (12) hereof.

USE OF PUBLIC AND RESERVED LANDS OF THE UNITED STATES

(29) The use is authorized of such public and reserved lands of the United States as may be necessary or convenient for the construction, operation, and maintenance of main transmission lines, to transmit electrical energy generated at Boulder Canyon Dam, together with the use of such public and reserved lands of the United States as may be designated by the Secretary, from time to time, for camp sites, residences for employees, warehouses, and other uses incident to the operation and maintenance of the power plant and incidental works.

PRIORITY OF CLAIMS OF THE UNITED STATES

(30) Claims of the United States arising out of this contract shall have priority over all others, secured or unsecured.

OTHER CONTRACTS

(31) Execution of this contract by the city, and performance of its obligations and assumptions of its rights hereunder, shall not be deemed in violation of any provision of any contract between the city and company heretofore executed.

TRANSFER OF INTEREST IN CONTRACT

(32) No voluntary transfer of this contract, or of the rights hereunder, shall be made without the written approval of the Secretary; and any successor or assign of the rights of either lessee, whether by voluntary transfer, judicial sale, foreclosure sale, or otherwise, shall be subject to all the conditions of the Boulder Canyon project act and also subject to all the provisions and conditions of this contract to the same extent as though such successor or assign were the original lessee hereunder; provided, that a mortgage or trust deed or judicial sales made thereunder shall not be deemed voluntary transfers within the meaning of this article.

RULES AND REGULATIONS

(33) This contract is subject to such rules and regulations conforming to the Boulder Canyon project act as the Secretary may from time to time promulgate; provided, however, that no right of

either lessee hereunder shall be impaired or obligation of either lessee hereunder shall be extended thereby; and provided further that opportunity for hearing shall be afforded each lessee by the Secretary prior to promulgation thereof.

AGREEMENT SUBJECT TO COLORADO RIVER COMPACT

(34) This contract is made upon the express condition and with the express understanding that all rights hereunder shall be subject to and controlled by the Colorado River compact, being the compact or agreement signed at Santa Fe, N. Mex., November 24, 1922, pursuant to act of Congress approved August 19, 1921, entitled "An act to permit a compact or agreement between the States of Arizona, California, Colorado, Nevada, New Mexico, Utah, and Wyoming respecting the disposition and apportionment of the waters of the Colorado River, and for other purposes," which compact was approved in section 13 (*a*) of the Boulder Canyon project act.

DISPUTES AND DISAGREEMENTS

(35) (*a*) Disputes or disagreements arising under this contract between the lessees or between a lessee and another allottee shall be arbitrated by three arbitrators, but only in case where it is not provided herein that the determination shall be made by the Secretary. Each disputant shall name one arbitrator and these two shall name the third. If either disputant has notified the other that arbitration is demanded and that it has named an arbitrator, and if thereafter the other disputant fails to name an arbitrator for fifteen days, the Secretary, if requested by either disputant, shall name such arbitrator, who shall proceed as though named by the disputant. The two arbitrators so named shall meet within five days after appointment of the second, and name the third. If they fail to do so, the Secretary will, on request by either disputant or arbitrator, name the third. A decision by any two of the three arbitrators shall be binding on the disputants and enforceable by court proceedings or by the Secretary in his discretion. Arbitration as herein provided, or the failure of the arbitrators to render a decision within six months of appointment of the third arbitrator, shall be a condition precedent to suit by either disputant against the other upon the matter in dispute.

(*b*) Disputes or disagreements between the United States and a lessee or lessees as to the interpretation or performance of the provisions of this contract shall be determined either by arbitration or court proceedings, the Secretary of the Interior being authorized to act for the United States in such proceedings. Whenever a controversy arises out of this contract, and the disputants agree to submit the matter to arbitration, the lessees, if the matter in dispute affects the rights of both lessees, or if the matter in dispute affects the rights of only one lessee, then such lessee, shall name one arbitrator and the Secretary shall name one arbitrator, and the two arbitrators thus chosen shall elect three other arbitrators, but in the event of their failure to name all or any of the three arbitrators within five (5) days after their first meeting, such arbitrators, not so elected, shall be named by the senior judge of the United States Circuit Court of Appeals for the ninth circuit. The decision of any three of such arbitrators shall be a valid and binding award of the arbitrators.

CONTINGENT UPON APPROPRIATIONS

(36) This contract is subject to appropriations being made by Congress from year to year of moneys sufficient to do the work provided for herein, and to there being sufficient moneys available in the Colorado River Dam fund to permit allotments to be made for the performance of such work. No liability shall accrue against the United States, its officers, agents, or employees, by reason of sufficient moneys not being so appropriated nor on account of their not being sufficient moneys in the Colorado River Dam fund to permit of said allotments. This agreement is also subject to the condition that if Congress fails to appropriate moneys for the commencement of construction work within five (5) years from and after execution hereof, or if for any other reason construction of Boulder Canyon Dam is not commenced within said time and thereafter prosecuted to completion with reasonable diligence, then and in such event any party hereto may terminate its obligations hereunder upon one (1) year's written notice to the other parties hereto.

MODIFICATIONS

(37) Any modification, extension, or waiver by the Secretary of any of the terms, provisions, or requirements of this contract for the benefit of any one or more of the allottees (including the lessees) shall not be denied to any other.

MEMBER OF CONGRESS CLAUSE

(38) No Member of or Delegate to Congress or Resident Commissioner, shall be admitted to any share or part of this contract, or to any benefit that may arise therefrom. Nothing, however, herein contained shall be construed to extend to this contract if made with a corporation for its general benefit.

In witness whereof, the parties hereto have caused this contract to be executed the day and year first above written.[1]

THE UNITED STATES OF AMERICA,
By RAY LYMAN WILBUR,
Secretary of the Interior.

Attest:
NORTHCUTT ELY.

THE CITY OF LOS ANGELES, acting by and through its Board of Water and Power Commissioners,
By JOHN R. HAYNES, *President.*

Attest:
JAS. P. VROMAN,
Secretary.

DEPARTMENT OF WATER AND POWER OF THE CITY OF LOS ANGELES, by the Board of Water and Power Commissioners,
By JOHN R. HAYNES, *President.*

Attest:
JAS. P. VROMAN,
Secretary.

SOUTHERN CALIFORNIA EDISON COMPANY (LTD.),
By JOHN B. MILLER, *Chairman.*

Attest:
CLIFTON PETERS,
Secretary.

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[1] Apr. 26, 1930; as amended by supplemental contracts dated May 28, 1930, and Sept. 23, 1931.

[APPENDIX 3]

BOULDER CANYON PROJECT

CONTRACT FOR ELECTRICAL ENERGY

THE UNITED STATES
AND
THE METROPOLITAN WATER DISTRICT
OF SOUTHERN CALIFORNIA

April 26, 1930
As amended May 31, 1930

CONTRACT FOR ELECTRICAL ENERGY

Article

CONTRACT FOR ELECTRICAL ENERGY[1]

(1) This contract, made this 26th day of April, nineteen hundred thirty, pursuant to the act of Congress approved June 17, 1902 (32 Stat. 388), and acts amendatory thereof or supplementary thereto, all of which acts are commonly known and referred to as the reclamation law, and particularly pursuant to the act of Congress approved December 21, 1928 (45 Stat. 1057), designated the Boulder Canyon project act, between the United States of America, hereinafter referred to as the United States, acting for this purpose by Ray Lyman Wilbur, Secretary of the Interior, hereinafter styled the Secretary, and the Metropolitan Water District of Southern California, a public corporation, organized and existing under and by virtue of the laws of the State of California, hereinafter styled the district.

Witnesseth:

EXPLANATORY RECITALS

(2) Whereas, for the purpose of controlling the floods, improving navigation, and regulating the flow of the Colorado River, providing for storage and for the delivery of the stored waters for reclamation of public lands and other beneficial uses exclusively within the United States, and for the generation of electrical energy, the Secretary, subject to the terms of the Colorado River compact, is authorized to construct, operate, and maintain a dam and incidental works in the main stream of the Colorado River at Black Canyon or Boulder Canyon, adequate to create a storage reservoir of a capacity of not less than twenty million acre-feet of water; also to construct, equip, operate, and maintain at or near said dam, or cause to be constructed, a complete plant and incidental structures suitable for the fullest economic development of electrical energy from the water discharged from said reservoir; and

(3) Whereas, after full consideration of the advantages of both the Black Canyon and Boulder Canyon dam sites, the Secretary has determined upon Black Canyon as the site of the aforesaid dam, hereinafter styled the Boulder Canyon Dam, and has determined that the revenues provided for by this contract, together with other contracts in accordance with the provisions of the Boulder Canyon project act, are adequate in his judgment to insure payment of all expenses of operation and maintenance of the Boulder Canyon Dam and appurtenant works incurred by the United States, and the repayment within fifty (50) years from the date of completion of said works of all amounts advanced to the Colorado River Dam fund under subdivision (*b*) of section 2 of the Boulder Canyon project act, together with interest thereon made reimbursable under said act; and

(4) Whereas, the United States proposes to enter into an agreement with the City of Los Angeles and Southern California Edison Co. (Ltd.), severally (hereinafter referred to as the lessees) for the lease, and the operation and maintenance of a Government-built power plant to be constructed at Boulder Canyon Dam, together with the

[1] Consolidating contracts of April 26, 1930, and May 31, 1930.

right to generate electrical energy, a copy of which said proposed lease is attached hereto marked "Exhibit A," and by this reference made a part hereof, wherein the Secretary has reserved the authority to, and in consideration of the execution thereof is authorized by each of the aforesaid lessees, severally, to contract with the other allottees named in the allocation set forth therein for the furnishing of energy to such allottees at transmission voltage in accordance with the allocation to each allottee, and the Secretary is therein granted by each lessee, severally, the power in accordance with the provisions thereof to enforce as against each lessee the rights to be acquired by such other allottees by contracts to be entered into with the United States; and

(5) Whereas, the district is desirous of entering into a contract with the United States providing for the delivery to the district each year from the Boulder Canyon Reservoir up to but not to exceed one million fifty thousand (1,050,000) acre-feet of water, and, in connection therewith and incident thereto, the district is desirous also of entering into a contract for the purchase of electrical energy to be generated at the power plant to be leased, as aforesaid, to the City of Los Angeles (hereinafter referred to as the city), and Southern California Edison Co. (Ltd.) (hereinafter referred to as the company), to aid in the transportation of such water supply;

(6) Now, therefore, in consideration of the mutual convenants herein contained, the parties hereto agree as follows, to wit:

ALLOCATION OF ELECTRICAL ENERGY

(7) The United States will cause to be delivered to the district under and in pursuance of and subject to the provisions of the aforesaid proposed lease, attached hereto as Exhibit A, for a period of fifty (50) years from the date at which energy is ready for delivery to the city, as announced by the Secretary, in accordance with the following allocation, to wit:

Of firm energy.

A. To the State of Nevada, for use in Nevada, not exceeding eighteen per centum (18%) of said total firm energy.

B. To the State of Arizona, for use in Arizona, not exceeding eighteen per centum (18%) of said total firm energy.

Should either of the States not take its full eighteen per centum (18%) allocation within a period of twenty (20) years hereof, the other may then contract for the energy not so taken up to four per centum (4%) of the total firm energy, provided that the combined amount used by the two States shall not, at any time, exceed thirty-six per centum (36%) of such total firm energy.

C. To the Metropolitan Water District of Southern California for pumping Colorado River water into and in its aqueduct for the use of such district within the following limits:

(1) Thirty-six per centum (36%) of said total firm energy, which shall be paid for whether taken or not; plus

(2) All secondary energy developed at the Boulder Dam power plant as provided in article fourteen (14) hereof; plus

(3) So much of the firm energy allocated to the States, the city and the company as may not be in use by them. Energy allocated to the States, but not in use by them, shall be released to the district

by the two lessees equally (unless they agree upon a different ratio) as follows:

(*a*) If the district makes a firm contract with the Secretary for the balance of the lease period for part or all of such unused States' energy (subject to the first right of the States thereto) such contract shall be made effective upon two years' written notice to the Secretary, and compensation to the lessees, respectively, for main transmission line property rendered idle;

(*b*) If the district does not so make a firm contract for such energy, then energy allocated to the States but not in use by them, shall be released to the district upon not less than fifteen months' written notice to the Secretary and at such compensation as the district and such lessees, respectively, may agree upon, to cover cost and overhead of replacing energy which otherwise would have been received at the Pacific coast end of the main transmission lines by the lessees, respectively. Such cost shall include interest on and depreciation and operation and maintenance of the plant capacity while required for the generation of such substitute energy; and also appropriate allowance for interest on and maintenance and depreciation of plant capacity rendered idle because of cessation of generation of such substitute energy until such time as such plant capacity would otherwise have been installed by the lessees, respectively, for their own requirements. If the district and the respective lessees fail to agree on such compensation, such energy shall nevertheless be released to the district, and the disagreement shall be determined in accordance with article twenty-two (22) (*a*) hereof. Such determination shall include allowance for items of costs and overhead as specified in this paragraph. Pending such determination, energy so released shall be paid for by the district at the rate for firm energy but the determination of compensation under article twenty-two (22) (*a*) hereof shall not be controlled by such rate.

During any year beginning June 1st, the district shall not use any secondary energy or any unused State energy, until it has first used subsequent to June 1st, next preceding, an amount of firm energy equivalent to one-twelfth of the amount of firm energy it is obligated to take and/or pay for, annually multiplied by the number of months elapsed since June 1 next preceding.

(4) If, due to temporary deficiency in secondary energy regularly used by the district, substitute energy is requested by the district in excess of the energy made available under the foregoing subparagraph (3) (*b*) the city and/or the company may release so much energy as may be practicable on the same terms as provided in subsection (3) (*b*) preceding.

D. To the municipalities of Anaheim, Beverly Hills, Burbank, Colton, Fullerton, Glendale, Newport Beach, Pasadena, Riverside, San Bernardino, and Santa Ana (referred to herein as "the munici-

palities"), six per centum (6%) in all, to be allocated between them as they may agree; but if no agreement is submitted to the Secretary on or before April 15, 1931, the Secretary shall determine the allocation of each.

E. To the City of Los Angeles, thirteen per centum (13%).

F. To Southern California Edison Co. (Ltd.), the Southern Sierras Power Co., the San Diego Consolidated Gas & Electric Co., and the Los Angeles Gas & Electric Corporation, referred to herein as the companies, nine per centum (9%) in all, division whereof between the companies shall be made according to mutual agreement among them, if possible. If no such agreement is submitted to the Secretary on or before April 15, 1931, the Secretary shall determine the allocation of each.

It is further agreed that—

(I) So much of the energy allocated to the States (thirty-six per centum (36%) of the firm energy) and not in use by them, or failing their use, by the district for the above purposes, shall be taken and paid for one-half by the city and one-half by the company. In addition, all firm energy allocated to the city (thirteen per centum (13%)) shall be taken and paid for by the city.

(II) All of the energy allocated to the municipalities may be contracted for in compliance with regulations of the Secretary, by any one or more of them, as they may agree, on or before April 15, 1931. So much of the energy allocated to the municipalities as is not so contracted for, or if contracted for, not used by them directly or under contract for municipal purposes and/or distribution to their inhabitants, shall be taken and paid for by the city.

(III) So much of the energy allocated to the Southern Sierras Power Co., the San Diego Consolidated Gas & Electric Co., and the Los Angeles Gas & Electric Corporation as is not firmly contracted for by them, severally, in compliance with regulations of the Secretary on or before April 15, 1931, shall be taken and paid for by the company.

(IV) If any allottee is permitted by the United States to divert water from the reservoir, at a time when the reservoir is not spilling, in consequence of which the amount of energy which would have been utilized is diminished, such diminution shall be debited to the allocation of firm energy herein made to such allottee; and charge for the energy equivalent of such diversion shall be made, and the amount of energy which the allottee shall otherwise be obligated to take and pay for hereunder shall be correspondingly reduced.

The reservoir shall be considered as spilling whenever water is being discharged in excess of the amount used for the generation of power, whether such waste occurs over the spillway or otherwise.

(V) Each of the States of Arizona and Nevada may, from time to time within the period of the aforesaid lease, contract for energy for use within such State in any amount until the total allocated, respectively, to each is in use as provided above; and may terminate such contract, or contracts, without prejudice to the right to again contract for such energy. All such contracts shall be executed with the Secretary. A contract requiring one thousand (1,000) horsepower (of maximum demand) or less may become effective or be terminated on six months written notice of requirement or termination given the director by the State; provided, that the notice given shall be two years if in the twelve months preceding said notice of demand the total

increment to such State has exceeded five thousand (5,000) horsepower of maximum demand or if in the twelve months preceding said notice of termination the decrement to such State has exceeded five thousand (5,000) horsepower of maximum demand. In all cases the director shall immediately transmit such notice to each lessee. Whenever the amount in use is in excess of five thousand (5,000) horsepower of maximum demand, the lessees, respectively, shall be compensated for property rendered idle by use of such excess in such amount as the Secretary shall determine to be equitable. Firm energy not contracted for by the States shall be available for use by the district as herein elsewhere provided, and if not in use by the States and/or the district, shall be taken and paid for equally by the two lessees. No right which may be available to a State under section five (5) (*c*) of the Boulder Canyon project act to execute a firm contract for electrical energy for use within the State shall be impaired by any provision of this contract.

Of secondary energy.

It is further agreed that the district shall have the right to purchase and use all secondary energy as provided in article nine (9) and article fourteen (14) hereof for the purposes stated in the first paragraph of subdivision (C) of this article. The city and the company shall each have the right to purchase and use one-half of all secondary energy not used by the district. Any such energy not used by one lessee shall be available, for the time being, to the other. If secondary energy is not taken by the district, the city, and/or the company then and in such event, the United States reserves the right to take, use, and dispose of such energy, from time to time, as it sees fit, giving credit therefor as provided in article twelve (12) of Exhibit A hereof.

Of firm energy allocated to but not used by the district.

It is further agreed that in the event the district shall fail for any reason to use all or any of the firm energy herein allotted to it for the only purpose for which said firm energy is allotted to it, that is, for pumping water into and in its aqueduct, then the Secretary shall dispose of such unused energy until required by the district for said purpose, crediting on the district's obligation the proceeds of such disposition as received; provided, however, that no disposition of such firm energy shall be made by the Secretary without first giving to a successor to the district which may undertake to build or maintain a Colorado River aqueduct the opportunity to take said firm energy for the same purpose and under the same terms as those to which the district was obligated; and provided further that in the event no such successor takes said firm energy as provided above, then no disposition of such firm energy shall be made by the Secretary without first giving to each lessee the opportunity to contract on equal terms and conditions, to be prescribed by the Secretary, for one-half of such energy, together with such portion of the remainder as the other lessee shall not elect to take.

Of firm energy not hereinbefore disposed of.

It is further agreed that the United States reserves the right, in case the dam which it erects provides a maximum water surface elevation in excess of one thousand two hundred twenty-two (1,222) feet above sea level (United States Geological Survey datum), and

thereby increases the quantity of firm energy above the quantity of four billion two hundred forty million (4,240,000,000) kilowatt-hours allocated above, to dispose of such increase, but not to exceed ninety million (90,000,000) kilowatt-hours per year (June 1st to May 31st, inclusive), to any municipality or municipalities by firm contract executed with the Secretary on or before April 15, 1931. Such disposition shall be without prejudice to any provision of this lease or of the allocation above referred to. So much of such additional energy as is not so contracted for shall be taken and paid for by the city. Generation of such additional energy shall in any event be effected by the city.

INSTALLATION OF MACHINERY

(8) The district shall have opportunity to be heard by the Secretary or his representatives upon the design, capacity, and cost of machinery to be provided and installed as stated in article eight (8) of Exhibit A hereof before contracts therefor are let.

FIRM AND SECONDARY ENERGY DEFINED

(9) The amount of firm energy for the first year of operation (June 1 to May 31, inclusive), following the date of the completion of the dam as announced by the Secretary, shall be defined as being four billion two hundred forty million (4,240,000,000) kilowatt-hours at transmission voltage. For every subsequent year the amount defined as firm energy shall be decreased by eight million seven hundred sixty thousand (8,760,000) kilowatt-hours from that of the previous year.

Nevertheless, if it be determined by the Secretary that the rate of decrease of kilowatt-hours per year as above stated is not in accord with actual conditions, the Secretary reserves the right to fix a lesser rate for any year (June 1st to May 31st, inclusive) in advance.

If the dam erected by the United States provides a maximum water surface elevation in excess of 1,222 feet above sea level (United States Geological Survey datum), the United States reserves the right to dispose of additional firm energy thereby made available, not to exceed ninety million (90,000,000) kilowatt-hours per year, subject to pro rata of the eight million seven hundred sixty thousand (8,760,000) kilowatt-hours annual diminution above provided for.

The term "secondary energy" wherever used herein shall mean all electrical energy generated in one year (June 1st to May 31st, inclusive) in excess of the amount of firm energy as hereinabove defined, available in such year.

If, by reason of international obligations arising through treaty or otherwise subsequent to the effective date of this contract, or by reason of interference with the program of construction and/or operation of the dam as provided for and contemplated by this contract, or by reason of other contingencies not now foreseen, the amount of firm energy available through the release of water from the Boulder Canyon Reservoir shall in fact be less than the amount of firm energy as above defined, then in any such event the obligation of the district to take and pay for its allocation of firm energy shall be reduced in an amount corresponding to such change. If for any reason the United States shall be wholly unable to fulfill its obligations hereunder in

respect of the delivery of water, then the district or either of them, may terminate this contract.

The right of the district and/or lessees to take and pay for energy at the rate for secondary energy after discharge of such party's obligation to the United States to pay for energy at the rate for firm energy shall not be impaired by reason of the fact that another allottee has not discharged its obligation to pay for energy at the rate for firm energy.

GENERATING AGENCIES

(10) In accordance with designation heretofore made by the Secretary, generation of energy allocated to the district shall be effected by the city. Nevertheless, this provision is subject to the following conditions:

(I) Should it prove of material economic advantage to the district to have a portion of its energy generated as off-peak energy, the city, after generating energy for the district to the full extent of the generating capacity which has been installed at the request of the district with allowance for the contemplated margin of reserve capacity, shall also generate such additional energy as may be needed by the district and as can be generated off-peak with other generating capacity leased to and being operated by the city at such times as such use does not conflict with the needs of the city and other allottees for whom the city is generating energy. The district will pay for the off-peak use of such other generating capacity, together with an allowance for a fair proportion of the operation and maintenance expenses, at rates to be agreed upon between the district and the city and approved by the Secretary, and if they are unable to agree then at a rate to be determined by the Secretary. Should the amount of energy which can be obtained by the district from the generating capacity which has been installed at the request of the district and from other capacity leased to and being operated by the city be insufficient to satisfy the requirements of the district, then the district may arrange with Southern California Edison Co. (Ltd.) for generation of such off-peak energy as may be needed by the district at such times and not obtainable from the city to such an extent as such generation does not conflict with the needs of the company and other allottees for whom the company is generating energy. Charge shall be made against the district for such service at the rate to be agreed upon between the district and the company and approved by the Secretary, and if they are unable to agree then at a rate to be determined in accordance with article twenty-two (*a*) hereof.

(II) Disputes and disagreements between any allottee and the lessee generating energy for it, with respect to such generation and/or the cost thereof, shall be determined by the Secretary unless otherwise specifically provided in this contract.

(III) Except for off-peak power furnished the district which shall be as provided in paragraph (I) of this article, all generation shall be effected at cost as determined in accordance with article 12 of Exhibit A hereof.

DELIVERY OF ELECTRICAL ENERGY

(11) (*a*) Energy shall be ready for delivery to the city and to the municipalities, including those contracting under the last paragraph of article seven (7) hereof, when the Secretary announces that one

billion two hundred fifty million (1,250,000,000) kilowatt-hours of energy per year is ready for delivery.

(*b*) Energy shall be ready for delivery to the district when the Secretary announces that two billion (2,000,000,000) kilowatt-hours of energy per year is available, which date, however, shall not be sooner than one (1) year after energy is ready for delivery to the city; provided, however, that the time when energy is ready for delivery to the district may be advanced subject to the approval of the Secretary, should the district so request, and that in such case the city shall be compensated by the district for interest and depreciation on and maintenance and operation of its main transmission line in case the total energy available to the city is reduced below one billion two hundred fifty million (1,250,000,000) kilowatt-hours per annum in the proportion that such kilowatt-hours available to the city is less than one billion two hundred fifty million (1,250,000,000).

(*c*) Energy shall be ready for delivery to the company when the Secretary announces that water capable of generating four billion two hundred forty million (4,240,000,000) kilowatt-hours of energy per year is available, which date, however, shall not be sooner than three (3) years after commencement of delivery of energy to the city and which shall not be until the water surface in Boulder Canyon Reservoir on August 1 immediately preceding has reached an elevation of eleven hundred fifty (1,150) feet above sea level (United States Geological Survey datum).

(*d*) Upon written notification from the Secretary that generation equipment is ready for operation by it and water is available for generating energy therefrom, each lessee will be required to assume the operation and maintenance of its respective portion of the power plant, and thereafter the district will look to such lessee, severally, and not to the United States for compensation for injury and/or damages of any kind which may in any manner arise out of the operation and maintenance of the portion of such plant leased to it.

CHARGES TO BE PAID THE UNITED STATES

(12) In consideration of this contract, the district agrees (1) to pay the United States for the use of falling water for generation of energy for the district (except as otherwise provided in article 15 hereof) as follows:

(*a*) One and sixty-three hundredths mills ($0.00163) per kilowatt-hour (delivered at transmission voltage) for firm energy;

(*b*) One-half mill ($0.0005) per kilowatt-hour (delivered at transmission voltage) for secondary energy;

(2) To pay the United States, for credit to the lessees, on account of use of the leased equipment as herein elsewhere provided; and

(3) To pay the United States, for credit to the lessees, on account of maintenance of said equipment, including repairs to and replacements of machinery, as herein elsewhere provided.

At the end of fifteen (15) years from the date of execution of this contract and every ten (10) years thereafter, the above rates of payment for firm and secondary energy shall be readjusted upon demand of any party hereto, either upward or downward as to price, as the Secretary may find to be justified by competitive conditions at distributing points or competitive centers.

The rate for falling water for generation of firm energy which shall be uniform for both lessees provided for by any such readjustment shall be arrived at by deducting from the price of electrical energy justified by competitive conditions at distributing points or competitive centers—(1) all fixed and operating costs of transmission to such points; (2) all fixed and operating costs of such portion of the power plant machinery as is to be operated and maintained by the several lessees, including the cost of repairs and replacements, together with such readjustment as to replacements as is provided for in paragraph 3 in this article; it being understood that such readjusted rates shall under no circumstances exceed the value of said energy, based upon competitive conditions at distributing points or competitive centers.

In arriving at the respective rates for "firm energy" and "secondary energy" as fixed herein, recognition has been given to the fact that "secondary energy" can not be relied upon as being at all times available, but is subject to diminution or temporary exhaustion; whereas "firm energy" is the amount of energy agreed upon as being available continuously as required during each year of the contract period. In the readjustment of the rate for "secondary energy," account shall be taken of the foregoing factors.

The charges agreed to be paid by the district to the United States, for credit to the city as generating agency, in this article, shall be such proportion of the cost incurred by such generating agency as it and the district may agree.

The term "cost," as used with reference to generating energy, shall include a proper proportionate allowance for amortization for the cost of machinery and equipment as provided in paragraph (*a*) of article 9 of Exhibit A hereof, a proper proportionate part of any annuity set up in accordance with regulations of the Secretary provided for in subdivision 3 of article sixteen (16) of Exhibit A hereof, for the purpose of meeting the obligation of the city to make replacements; and a proper proportionate part of the actual outlay of the city for operating such machinery and equipment and keeping the same in repair, including reasonable overhead charges. The extent of the allowance for the several items in the event of disagreement between the city and district, and the system of accounting therefor, shall be prescribed by the Secretary under uniform regulations as required by section 6 of the Boulder Canyon project act.

MONTHLY PAYMENTS AND PENALTIES

(13) The district shall pay monthly for energy in accordance with the rates established or provided for herein and for the generation thereof as provided in article twelve (12).

When energy taken in any month is not in excess of one-twelfth (1/12) of the minimum annual obligation, bill for such month shall be computed at the rate for firm energy in effect when such energy was taken on the basis of the actual amount of energy used during such month. All energy used during any month in excess of one-twelfth (1/12) of the minimum annual obligation shall be paid for at the rate for secondary energy in effect when such energy was taken; provided, however, that the secondary rate shall not apply to any energy taken during any month unless and until an amount of energy equivalent to one-twelfth (1/12) of the minimum annual obligation has been taken for all months beginning with the month of June

immediately preceding; provided, however, that the bill for the month of May shall not be less than the difference between the minimum annual payment, as provided in article fourteen (14) hereof, and the sum of the amounts charged for firm energy during the preceding eleven months. The United States will submit bills to the district by the fifth of each month immediately following the month during which the energy is generated, and payments shall be due on the first day of the month immediately succeeding. If such charges are not paid when due, a penalty of one per centum (1%) of the amount unpaid shall be added thereto, and thereafter an additional penalty of one per centum (1%) of the amount unpaid shall be added on the first day of each calendar month thereafter during such delinquency.

The monthly charge for generation of such energy to be credited to the generating agency shall be in such amount as may be determined in accordance with article twelve (12) hereof.

MINIMUM ANNUAL PAYMENT

(14) The minimum quantity of firm energy which the district shall take and/or pay for each year (June 1 to May 31, inclusive), under the terms of this contract, and after the same is ready for delivery to the district, as provided in subdivision (*b*) of article eleven (11) hereof, shall be thirty-six per centum (36%) of all firm energy as defined in article nine (9) hereof, available in said year. The total payments made by the district for firm energy available in any year (June 1 to May 31, inclusive), whether any energy is taken by it or not, exclusive of its payments for credit to the generating agency, shall be not less than the number of kilowatt-hours of firm energy which the district is obligated to take and/or pay for during said year, multiplied by one and sixty-three hundredths mills ($0.00163), or multiplied by the adjusted rate of payment for firm energy in case the said rate is adjusted as provided in article twelve (12) hereof. For a fractional year at the beginning or end of the contract period, the minimum annual payment for firm energy shall be proportionately adjusted in the ratio that the number of days water is available for generation of energy in such fractional year bears to three hundred sixty-five (365); provided, however, that in order to afford a reasonable time for the district to absorb the energy contracted for, the minimum annual payments by it for the first three (3) years after energy is ready for delivery to it, as announced by the Secretary, as herein elsewhere provided, shall be as follows, in percentages of the ultimate annual obligation, to take and/or pay for firm energy:

	Per cent
First year	55
Second year	70
Third year	85
Fourth year and all subsequent years	100

During said absorption period, if the quantity of energy taken in any one year (June 1 to May 31, inclusive), is in excess of the above percentages of the ultimate obligation during such year to take and/or pay for firm energy, such excess shall be paid for at the rate for secondary energy. Provided, further, that the minimum annual payment shall be reduced in case of interruptions or curtailment of delivery of water as provided in article sixteen (16) hereof.

The total payments made by the district for generation of such energy, to be credited to the generating agency, shall be determined in accordance with article twelve (12) hereof.

NO ENERGY TO BE DELIVERED WITHOUT PAYMENT

(15) Unless the written consent of the Secretary be first obtained, no electrical energy shall be generated for, or delivered to, the district if it shall be in arrears for more than twelve (12) months in the payment of any charge and/or penalty due or to become due the United States hereunder, whether for its own use or for credit to the generating agency.

INTERRUPTIONS IN DELIVERY OF WATER

(16) The United States will deliver water continuously to each lessee in the quantity, in the manner, and at the times necessary for the generation of the energy which each of said lessees has the right and/or obligation to generate under this contract in accordance with the load requirements of each of said lessees, and of allottees for which the respective lessees are generating agencies excepting only that such delivery shall be regulated so as not to interfere with the necessary use of said Boulder Canyon Dam and Reservoir for river regulation, improvement of navigation, flood control, irrigation, or domestic uses, and the satisfaction of present perfected rights in or to the waters of the Colorado River, or its tributaries, in pursuance of Article VIII of the Colorado River compact, and this contract is made upon the express condition, and with the express covenant, that the rights of the district to the waters of the Colorado River, or its tributaries, are subject to, and controlled by, the Colorado River compact. The United States reserves the right temporarily to discontinue or reduce the delivery of water for the generation of energy at any time for the purpose of maintenance, repairs, and/or replacements, or installation of equipment, and for investigations and inspections necessary thereto; provided, however, that the United States shall except in case of emergency give to the lessees reasonable notice in advance of such temporary discontinuance or reduction, and that the United States shall make such inspections and perform such maintenance and repair work after consultation with the lessees at such times and in such manner as will cause the least inconvenience to the lessees, and shall prosecute such work with diligence, and, without unnecessary delay, will resume delivery of water so discontinued or reduced. Should the delivery of water be discontinued or reduced below the amount required, severally, for the normal generation of firm energy for the payment of which said district has hereby obligated itself, the total number of hours of such discontinuance or reduction in any year shall be determined by taking the sum of the number of hours during which the delivery of water is totally discontinued, and the product of the number of hours during which the delivery of water is partially reduced and the percentage of said partial reduction below the actual quantity of water required by the lessees, severally, for the normal generation of firm energy. Total or partial reductions in delivery of water which do not reduce the power output below the amount required at the time by such lessee for the normal generation of firm energy, will not be considered in determining the total hours of dis-

continuance in any year. The minimum annual payment specified in article fourteen (14) hereof shall be reduced by the ratio that the total number of hours of such discontinuance bears to eight thousand seven hundred sixty (8,760). In no event shall any liability accrue against the United States, its officers, agents, and/or employees, for any damage, direct or indirect, arising on account of drought, hostile diversion, act of God, or of the public enemy, or other similar cause; nevertheless interruptions in delivery of water occasioned by such causes shall be governed as hereinabove provided in this article.

MEASUREMENT OF ENERGY

(17) The energy received by the district shall be measured at transmission voltage at the point where the district's transmission lines connect to the switching station at Boulder Canyon Dam called the point of delivery, or at the option of the Secretary, the energy received by the district shall be measured at the low voltage side of the substations serving the district, in which event suitable correction shall be made in the amounts of energy as measured to cover all losses between the points of measurement and the point of delivery at transmission voltage at Boulder Canyon Dam. Suitable meter equipment satisfactory to the Secretary for measuring the energy received by the district shall be provided and maintained by and at the expense of the district. Meters may be tested at any reasonable time upon the request of either the United States or the district, and in all events they shall be tested at least once each year. If the test discloses that the error of any meter exceeds one per centum (1%) such meter shall be adjusted so that the error not exceed one-half of one per centum (½%). Meter equipment shall be tested by means of suitable testing equipment which will be provided by the United States, and which shall be calibrated by the United States Bureau of Standards as often as requested by either the United States or the district. Meters shall be kept sealed, and the seal shall be broken only in the presence of representatives of both the United States and the district and likewise all tests of meter equipment shall be conducted only when representatives of both the United States and the district are present.

INSPECTION BY THE UNITED STATES

(18) The Secretary, or his representatives, shall at all times have the right of ingress to and egress from all works of the district for the purpose of inspection, repairs, and maintenance of works of the United States, and for all other proper purposes. The Secretary, or his representatives, shall also have free access at all reasonable times to the books and records of the district relating to the disposal of electrical energy, with the right at any time during office hours to make copies of or from the same.

TRANSMISSION

(19) (*a*) The city having, in article twenty-five (25) of Exhibit A hereof, undertaken that it shall operate and maintain at cost, including allowance for necessary overhead expense, the lines required for transmitting all Boulder Canyon power from the power plant to the pumping plants of the district, allocated to and used by the district for pumping water into and in its aqueduct; provided, that in the

event it should prove materially to the advantage of the district, at any time during the 50-year period of this lease, the district may operate and maintain such transmission lines itself; and provided further, that in the event of disagreement or dispute between the district and the city as to such matter, such disagreement shall be determined as provided in article twenty-two (*a*) (22*a*) hereof; the Secretary will, if by such determination energy allocated to and used by the district is to be transmitted by the district instead of the city, cause delivery of energy at transmission voltage to be made accordingly.

DURATION OF CONTRACT

(20) This contract shall become effective as soon as the first act of Congress appropriating funds for commencement of construction of Boulder Canyon Dam has become law, and as to the district shall remain in effect until the expiration of a period of fifty (50) years from the date at which energy is ready for delivery to the city, as determined by the Secretary. The holder of any contract for electrical energy, including the district, not in default thereunder, shall be entitled to a renewal thereof upon such terms and conditions as may be authorized or required under the then existing laws and regulations, unless the property of such holder dependent for its usefulness on a continuation of the contract be purchased or acquired and such contractor be compensated for damages to its property, used and useful in the transmission and distribution of such electrical energy and not taken, resulting from the termination of the supply.

CONTRACT MAY BE TERMINATED IN CASE OF BREACH

(21) If the district shall be in arrears for more than twelve (12) months in the payment of any charge and/or penalty due or to become due to the United States hereunder, and shall not have obtained an extension of time for payment thereof, or, if such extension be obtained, has not made such payment within the time as extended, then the Secretary reserves the right thereafter, and upon two (2) years' written notice to the district, to terminate this contract and dispose of the energy herein allocated as he may see fit; provided, he shall first give opportunity to each lessee to contract on equal and uniform terms and conditions, to be prescribed by the Secretary, for one-half of such energy, together with such portion of the remainder as the other lessee shall not elect to take, and provided further, that such disposition shall be subject to the condition that the district shall have the right at any time within ten (10) years from date of the first of the defaults or breaches for which the contract is terminated, to become reinstated hereunder by payment to the United States of all arrearages and penalties, if any, together with any and all loss incurred by the United States by reason of such termination, and compensation to the contractor or contractors for equipment rendered idle by such reinstatement. In case of disagreement or dispute as to any of the items so to be paid the same shall be determined as provided in article 22 hereof. The waiver of a breach of any of the provisions of this contract shall not be deemed to be a waiver of any other provisions hereof, or of a subsequent breach of such provision.

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DISPUTES AND DISAGREEMENTS

(22) (*a*) Disputes or disagreements arising under this contract between the district and any lessee or other allottee shall be arbitrated by three arbitrators, except where otherwise provided in this contract. The district shall name one arbitrator and the other disputant shall name one. These two shall name the third. If either disputant has notified the other that arbitration is demanded and that it has named an arbitrator, and if thereafter the other disputant fails to name an arbitrator for fifteen days, the Secretary, if requested by either disputant, shall name such arbitrator, who shall proceed as though named by the disputant. The two arbitrators so named shall meet within five days after appointment of the second and name the third. If they fail to do so, the Secretary will, on request by either disputant or arbitrator, name the third. A decision by any two of the three arbitrators shall be binding on the disputants and enforceable by court proceedings or by the Secretary in his discretion. Arbitration as herein provided, or the failure of the arbitrators to render a decision within six months of appointment of the third arbitrator, shall be a condition precedent to suit by either disputant against the other upon the matter in dispute.

(*b*) Disputes or disagreements between the United States and the district as to the interpretation or performance of the provisions of this contract shall be determined either by arbitration or court proceedings, the Secretary of the Interior being authorized to act for the United States in such proceedings. Whenever a controversy arises out of this contract, and the disputants agree to submit the matter to arbitration, the district shall name one arbitrator and the Secretary shall name one arbitrator, and the two arbitrators thus chosen shall elect three other arbitrators, but in the event of their failure to name all or any of the three arbitrators within five (5) days after their first meeting, such arbitrators, not so elected, shall be named by the senior judge of the United States Circuit Court of Appeals for the Ninth Circuit. The decision of any three of such arbitrators shall be a valid and binding award of the arbitrators.

USE OF PUBLIC AND RESERVED LANDS OF THE UNITED STATES

(23) The use is authorized of such public and reserved lands of the United States as may be necessary or convenient for the construction, operation, and maintenance of main transmission lines, to transmit electrical energy generated at Boulder Canyon Dam, together with the use of such public and reserved lands of the United States as may be designated by the Secretary, from time to time, for camp sites, residences for employees, warehouses, and other uses incident to the operation and maintenance of the power plant and incidental works.

PRIORITY OF CLAIMS OF THE UNITED STATES

(24) Claims of the United States arising out of this contract shall have priority over all others, secured or unsecured.

TRANSFER OF INTEREST IN CONTRACT

(25) No voluntary transfer of this contract, or of the rights hereunder, shall be made without the written approval of the Secretary; and any successor or assign of the rights of the district, whether by

voluntary transfer, judicial sale, foreclosure sale, or otherwise, shall be subject to all the conditions of the Boulder Canyon project act, and also subject to all the provisions and conditions of this contract to the same extent as though such successor or assign were the original contractor hereunder; provided, that a mortgage or trust deed or judicial sales made thereunder shall not be deemed voluntary transfers within the meaning of this article.

RULES AND REGULATIONS

(26) This contract is subject to such rules and regulations conforming to the Boulder Canyon project act as the Secretary may from time to time promulgate; provided, however, that no right of the district hereunder shall be impaired or obligation of the district hereunder shall be extended thereby; and provided further, that opportunity for hearing shall be afforded the district by the Secretary prior to promulgation thereof.

AGREEMENT SUBJECT TO COLORADO RIVER COMPACT

(27) This contract is made upon the express condition and with the express understanding that all rights hereunder shall be subject to and controlled by the Colorado River compact, being the compact or agreement signed at Santa Fe, N. Mex., November 24, 1922, pursuant to act of Congress approved August 19, 1921, entitled "An act to permit a compact or agreement between the States of Arizona, California, Colorado, Nevada, New Mexico, Utah, and Wyoming respecting the disposition and apportionment of the waters of the Colorado River, and for other purposes," which compact was approved in section 13 (*a*) of the Boulder Canyon project act.

PERFORMANCE BOND

(28) The district shall, upon demand of the Secretary, furnish and keep current for the use and benefit of the United States a performance bond in a penal sum equal to the annual obligation assumed by it hereunder; or, in lieu thereof, deposit security satisfactory to the Secretary, conditioned upon the faithful performance of this contract. In case security is deposited, the Secretary may make such disposition of the same as will accomplish the purpose for which submitted.

CONTINGENT UPON APPROPRIATIONS

(29) This contract is subject to appropriations being made by Congress from year to year of moneys sufficient to do the work provided for herein, and to there being sufficient moneys available in the Colorado River Dam fund to permit allotments to be made for the performance of such work. No liability shall accrue against the United States, its officers, agents, or employees, by reason of sufficient moneys not being so appropriated or on account of there not being sufficient moneys in the Colorado River Dam fund to permit of said allotments. This agreement is also subject to the condition that if Congress fails to appropriate moneys for the commencement of construction work within five (5) years from and after execution hereof, or if for any other reason construction of Boulder Canyon Dam is not commenced within said time and thereafter prosecuted to completion with reasonable

diligence, then and in such event either party hereto may terminate its obligations hereunder upon one (1) year's written notice to the other party hereto.

TITLE TO REMAIN IN UNITED STATES

(30) As provided by section six (6) of the Boulder Canyon project act, the title to Boulder Canyon Dam, reservoir, plant, and incidental works shall forever remain in the United States.

REMEDIES UNDER CONTRACT NOT EXCLUSIVE

(31) Nothing contained in this contract shall be construed as in any manner abridging, limiting, or depriving the United States of any means of enforcing any remedy either at law or in equity for the breach of any of the provisions hereof which it would otherwise have.

MEMBER OF CONGRESS CLAUSE

(32) No Member of or Delegate to Congress or Resident Commissioner shall be admitted to any share or part of this contract, or to any benefit that may arise therefrom. Nothing, however, herein contained shall be construed to extend to this contract if made with a corporation for its general benefit.

In witness whereof, the parties hereto have caused this contract to be executed the day and year first above written.[1] (Executed in quadruplicate original.)

THE UNITED STATES OF AMERICA,
By RAY LYMAN WILBUR,
Secretary of the Interior.

Attest:
NORTHCUTT ELY.

THE METROPOLITAN WATER DISTRICT
OF SOUTHERN CALIFORNIA,
By W. P. WHITSETT,
Chairman of the Board of Directors.

Approved as to form:
By W. B. MATHEWS,
General Counsel.

Attest:
S. H. FINLEY,
Secretary of the Board of Directors.

EXHIBIT A

This exhibit consists of the contract for lease of power privilege between the United States and the City of Los Angeles, its Department of Water and Power, and Southern California Edison Company (Ltd.), dated April 26, 1930, amended May 28, 1930, and is omitted from this copy. See Appendix 2.

[1] Apr. 26, 1930; as amended May 31, 1930.

[APPENDIX 4]

BOULDER CANYON PROJECT

CONTRACT FOR ELECTRICAL ENERGY

THE UNITED STATES
AND
LOS ANGELES GAS AND ELECTRIC CORPORATION

November 12, 1931

CONTRACT FOR ELECTRICAL ENERGY

Article

CONTRACT FOR ELECTRICAL ENERGY

(1) This contract, made this 12th day of November, nineteen hundred thirty-one, pursuant to the act of Congress approved June 17, 1902 (32 Stat. 388), and acts amendatory thereof or supplementary thereto, all of which acts are commonly known and referred to as the reclamation law, and particularly pursuant to the act of Congress approved December 21, 1928 (45 Stat. 1057), designated the Boulder Canyon project act, between the United States of America, hereinafter referred to as the United States, acting for this purpose by Ray Lyman Wilbur, Secretary of the Interior, hereinafter styled the Secretary, and Los Angeles Gas & Electric Corporation, a corporation organized and existing under and by virtue of the laws of the State of California, hereinafter styled the Allottee.

Witnesseth:

EXPLANATORY RECITALS

(2) Whereas, for the purpose of controlling the floods, improving navigation, and regulating the flow of the Colorado River, providing for storage and for the delivery of the stored waters for reclamation of public lands and other beneficial uses exclusively within the United States, and for the generation of electrical energy, the Secretary, subject to the terms of the Colorado River compact, is authorized to construct, operate, and maintain a dam and incidental works in the main stream of the Colorado River at Black Canyon or Boulder Canyon, adequate to create a storage reservoir of a capacity of not less than twenty million acre-feet of water; also to construct, equip, operate, and maintain at or near said dam, or cause to be constructed, a complete plant and incidental structures suitable for the fullest economic development of electrical energy from the water discharged from said reservoir; and

(3) Whereas, after full consideration of the advantages of both the Black Canyon and Boulder Canyon Dam sites, the Secretary has determined upon Black Canyon as the site of the aforesaid dam, hereinafter styled the Hoover Dam, and has determined that the revenues provided for by this contract, together with other contracts in accordance with the provisions of the Boulder Canyon project act, are adequate in his judgment to insure payment of all expenses of operation and maintenance of the Hoover Dam and appurtenant works incurred by the United States, and the repayment within fifty (50) years from the date of completion of said works of all amounts advanced to the Colorado River Dam fund under subdivision (*b*) of section 2 of the Boulder Canyon project act, together with interest thereon made reimbursable under said act; and

(4) Whereas, the United States has entered into an agreement of date April 26, 1930, with the City of Los Angeles (hereinafter styled the city), and Southern California Edison Co. (Ltd.) (hereinafter styled the company), severally (both hereinafter referred to as the lessees) for the lease, and the operation and maintenance of a Government-built power plant to be constructed at Hoover Dam, together with the right to generate electrical energy (a copy of which said lease

as amended by supplemental agreements of date May 28, 1930, and September 23, 1931, is attached hereto marked Exhibit A, and by this reference made a part hereof); and whereas in said lease the Secretary has reserved the authority to, and in consideration of the execution thereof is authorized by each of the aforesaid lessees, severally, to contract with the other allottees named in the allocation set forth therein for the furnishing of energy to such allottees at transmission voltage in accordance with the allocation to each allottee, and the Secretary is therein granted by each lessee, severally, the power in accordance with the provisions thereof to enforce as against each lessee the rights to be acquired by such other allottees by contracts to be entered into with the United States; and whereas in said lease the company has agreed to generate energy allocated to the allottee; and

(5) Whereas, the company, the allottee, the Southern Sierra Power Co., and San Diego Consolidated Gas & Electric Co., have mutually agreed upon a division of all energy for which the company is obligated and/or entitled to take under said agreement marked Exhibit A, on the basis of seventy-five per centum (75%) thereof to the company, ten per centum (10%) thereof to the allottee, ten per centum (10%) thereof to the Southern Sierras Power Co., and five per centum (5%) thereof to San Diego Consolidated Gas & Electric Co., and the allottee is desirous of entering into a contract with the United States for the purchase of electrical energy to be generated at the power plant to be leased, as aforesaid, to the company;

(6) Now, therefore, in consideration of the mutual covenants herein contained, the parties hereto agree as follows, to wit:

ALLOCATION OF ELECTRICAL ENERGY

(7) The United States will cause electrical energy to be delivered to the allottee under and in pursuance of and subject to the provisions of the aforesaid lease, attached hereto as Exhibit A, throughout the period during which the company is obligated or entitled to take energy under said lease, in accordance with the following allocation, to wit:

Of firm energy, as defined in article eight (8) hereof;

A. To the State of Nevada, for use in Nevada, not exceeding eighteen per centum (18%) of said total firm energy.

B. To the State of Arizona, for use in Arizona, not exceeding eighteen per centum (18%) of said total firm energy. Should either of the States not take its full eighteen per centum (18%) allocation within a period of twenty (20) years hereof, the other may then contract for the energy not so taken up to four per centum (4%) of the total firm energy, provided that the combined amount used by the two States shall not, at any time, exceed thirty-six per centum (36%) of such total firm energy.

C. To the Metropolitan Water District of Southern California for pumping Colorado River water into and in its aqueduct for the use of such district within the following limits:

(1) Thirty-six per centum (36%) of said total firm energy, plus

(2) All secondary energy developed at the Hoover Dam power plant as provided in article thirteen (13) hereof, plus

(3) So much of the firm energy allocated to the States, the city, the company, and the allottee as may not be used by them. Energy

allocated to the States, but not in use by them, shall be released to the district by the two lessees as hereinafter in this subdivision three (3) provided. Unless otherwise agreed upon by said lessees, such release shall be made on the basis of one-half by the city and one-half by the company and the allottee collectively; provided, however, that in any such case the allottee shall release ten per centum (10%) of all energy required to be released by the company and the allottee collectively.

(*a*) If the district makes a firm contract with the Secretary for the balance of the lease period for part or all of such unused States' energy (subject to the first right of the States thereto), such contract shall be made effective upon two years' written notice to the Secretary and compensation to the lessees, respectively, for main transmission line property rendered idle;

(*b*) If the district does not so make a firm contract for such energy, then energy allocated to the States, but not in use by them, shall be released to the district upon not less than fifteen months' written notice to the Secretary and at such compensation as the district and such lessees, respectively, may agree upon, to cover cost and overhead of replacing energy which otherwise would have been received at the Pacific coast end of the main transmission lines by the lessees, respectively. Such cost shall include interest on and depreciation and operation and maintenance of the plant capacity while required for the generation of such substitute energy; and also appropriate allowance for interest on and maintenance and depreciation of plant capacity rendered idle because of cessation of generation of such substitute energy until such time as such plant capacity would otherwise have been installed by the lessees, respectively, for their own requirements. If the district and the respective lessees fail to agree on such compensation, such energy shall nevertheless be released to the district, and the disagreement shall be determined in accordance with article twenty-one (21) (*a*) hereof. Such determination shall include allowance for items of cost and overhead as specified in this paragraph. Pending such determination, energy so released shall be paid for by the district at the rate for firm energy, but the determination of compensation under article twenty-one (21) (*a*) hereof shall not be controlled by such rate.

During any year beginning June 1 the district shall not use any secondary energy or any unused State energy until it has first used, subsequent to June 1 next preceding, an amount of firm energy equivalent to one-twelfth (1/12) of the amount of firm energy it is obligated to take and/or pay for annually multiplied by the number of months elapsed since June 1 next preceding.

(4) If, due to temporary deficiency in secondary energy regularly used by the district, substitute energy is requested by the district in excess of the energy made available under the foregoing subparagraph (3) (*b*), the city and/or the company and/or the allottee may

release so much energy as may be practicable on the same terms as provided in subsection (3) (*b*) preceding.

D. To the municipalities of Anaheim, Beverly Hills, Burbank, Colton, Fullerton, Glendale, Newport Beach, Pasadena, Riverside, San Bernardino, and Santa Ana (referred to herein as "the municipalities") six per centum (6%) in all, to be allocated between them as they may agree, but if no agreement is submitted to the Secretary on or before November 16, 1931, the Secretary shall determine the allocation of each.

E. To the City of Los Angeles, thirteen per centum (13%).

F. To Southern California Edison Co. (Ltd.), the Southern Sierras Power Co., San Diego Consolidated Gas & Electric Co., and Los Angeles Gas & Electric Corporation, referred to herein as "the companies," nine per centum (9%) in all, whereof ten per centum (10%) of said nine per centum (9%), being nine-tenths of one per centum (0.9 of 1%) of all firm energy, shall be taken and/or paid for by the allottee.

It is further agreed that—

(I) So much of the energy allocated to the States (thirty-six per centum (36%) of the firm energy) and not in use by them, or failing their use, by the district for the above purposes, shall be taken and/or paid for one-half by the city, and one-half by the company and the allottee collectively, of which said latter one-half ten per centum (10%) shall be taken and/or paid for by the allottee. In addition, all firm energy allocated to the city (thirteen per centum (13%)) shall be taken and paid for by the city.

(II) All of the energy allocated to the municipalities may be contracted for in compliance with regulations of the Secretary, by any one or more of them, as they may agree, on or before November 16, 1931. So much of the energy allocated to the municipalities as is not so contracted for, or if contracted for, not used by them directly or under contract for municipal purposes and/or distribution to their inhabitants, shall be taken and paid for by the city.

(III) So much of the energy allocated to the Southern Sierras Power Co., the San Diego Consolidated Gas & Electric Co., and the Los Angeles Gas & Electric Corporation as is not firmly contracted for by them, severally, in compliance with regulations of the Secretary on or before November 16, 1931, shall be taken and/or paid for by the company.

(IV) If any allottee is permitted by the United States to divert water from the reservoir, at a time when the reservoir is not spilling, in consequence of which the amount of energy which would have been utilized is diminished, such diminution shall be debited to the allocation of firm energy herein made to such allottee; and charge for the energy equivalent of such diversion shall be made, and the amount of energy which the allottee shall otherwise be obligated to take and/or pay for hereunder shall be correspondingly reduced.

The reservoir shall be considered as spilling whenever water is being discharged in excess of the amount used for the generation of power, whether such waste occurs over the spillway or otherwise.

(V) Each of the States of Arizona and Nevada may, from time to time within the period of the aforesaid lease, contract for energy for use within such State in any amount until the total allocated, respectively, to each is in use as provided above; and may terminate such

contract, or contracts, without prejudice to the right to again contract for such energy. All such contracts shall be executed with the Secretary. A contract requiring one thousand (1,000) horsepower (of maximum demand) or less may become effective or be terminated on six months' written notice of requirement or termination given the director by the State; provided, that the notice given shall be two years if in the twelve months preceding said notice of demand, the total increment to such State has exceeded five thousand (5,000) horsepower of maximum demand, or if in the twelve months preceding said notice of termination the decrement to such State has exceeded five thousand (5,000) horsepower of maximum demand. In all cases the director shall immediately transmit such notice to each lessee. Whenever the amount in use is in excess of five thousand (5,000) horsepower of maximum demand, the lessees, and the allottee, respectively, shall be compensated for property rendered idle by use of such excess in such amount as the Secretary shall determine to be equitable. Firm energy not contracted for by the States shall be available for use by the district as herein elsewhere provided, and if not in use by the States and/or the district, shall be taken and paid for, one-half by the city, and one-half by the company and the allottee, of which latter one-half the allottee shall take and/or pay for ten per centum (10%). No right which may be available to a State under section five (5) (*c*) of the Boulder Canyon project act to execute a firm contract for electrical energy for use within the State shall be impaired by any provision of this contract.

Of secondary energy.

It is further agreed that the district shall have the right to purchase and use all secondary energy as provided in article eight (8) and article thirteen (13) hereof for the purposes stated in the first paragraph of subdivision (C) of this article. The city shall have the right to purchase and use one-half of all secondary energy not used by the district. The company and the allottee shall also have the right to purchase and use one-half of all secondary energy not used by the district, of which said one-half the allottee shall have the right to purchase and use ten per centum (10%). Any such energy not used by one lessee shall be available, for the time being, to the other lessee; provided, however, that of any such energy available to the company, the allottee shall be entitled to purchase and use ten per centum (10%). If secondary energy is not taken by the district, the city, the company, and/or the allottee, then and in such event the United States reserves the right to take, use, and dispose of such energy, from time to time, as it sees fit, giving credit therefor as provided in article twelve (12) of Exhibit A hereof.

Of firm energy allocated to but not used by the district.

It is further agreed that in the event the district shall fail for any reason to use all or any of the firm energy herein allotted to it for the only purpose for which said firm energy is allotted to it, that is, for pumping water into and in its aqueduct, then the Secretary shall dispose of such unused energy until required by the district for said purpose, crediting on the district's obligation the proceeds of such disposition as received; provided, however, that no disposition of such firm energy shall be made by the Secretary without first giving to a successor to the district which may undertake to build or maintain

a Colorado River aqueduct the opportunity to take said firm energy for the same purpose and under the same terms as those to which the district was obligated; and provided further, that in the event no such successor takes said firm energy as provided above, then no disposition of such firm energy shall be made by the Secretary without first giving to the city, the company, and the allottee the right to contract for such energy on equal terms and conditions to be prescribed by the Secretary. In such case, the city shall have the right to contract for one-half of such energy, together with such portion of the remainder as the company and the allottee shall not elect to take, and the company and the allottee shall have the right to contract for one-half of such energy, together with such portion of the remainder as the city shall not elect to take; provided, that of the amount of such energy which the company and the allottee jointly shall be entitled to take hereunder, the allottee shall have the right to contract for ten per centum (10%).

Of firm energy not hereinbefore disposed of.

It is further agreed that the United States reserves the right, in case the dam which it erects provides a maximum water surface elevation in excess of one thousand two hundred twenty-two (1,222) feet above sea level (United States Geological Survey datum), and thereby increases the quantity of firm energy above the quantity of four billion two hundred forty million (4,240,000,000) kilowatt-hours allocated above, to dispose of such increase, but not to exceed ninety million (90,000,000) kilowatt-hours per year (June 1 to May 31, inclusive), to any municipality or municipalities by firm contract executed with the Secretary on or before November 16, 1931. Such disposition shall be without prejudice to any provision of this contract or of the allocation above referred to. So much of such additional energy as is not so contracted for shall be taken and paid for by the city. Generation of such additional energy shall in any event be effected by the city.

FIRM AND SECONDARY ENERGY DEFINED

(8) The amount of firm energy for the first year of operation (June 1 to May 31, inclusive), following the date of the completion of the dam as announced by the Secretary, shall be defined as being four billion two hundred forty million (4,240,000,000) kilowatt-hours at transmission voltage. For every subsequent year the amount defined as firm energy shall be decreased by eight million seven hundred sixty thousand (8,760,000) kilowatt-hours from that of the previous year.

Nevertheless, if it be determined by the Secretary that the rate of decrease of kilowatt-hours per year as above stated is not in accord with actual conditions, the Secretary reserves the right to fix a lesser rate for any year (June 1 to May 31, inclusive) in advance.

If, by reason of international obligations arising through treaty or otherwise subsequent to the effective date of this contract, or by reason of interference with the progress of construction and/or operation of the dam as provided for and contemplated by this contract, or by reason of other contingencies not now foreseen, the amount of firm energy available through the release of water from the Boulder Canyon Reservoir shall in fact be less than the amount of firm energy

as above defined, then in any such event the obligation of the allottee to take electrical energy shall be reduced in an amount corresponding to such change. If for any reason the United States shall be wholly unable to fulfill its obligations hereunder in respect of the delivery of water, then the allottee may terminate this contract.

If the dam erected by the United States provides a maximum water surface elevation in excess of 1,222 feet above sea level (United States Geological Survey datum), the United States reserves the right to dispose of additional firm energy thereby made available, not to exceed ninety million (90,000,000) kilowatt-hours per year, subject to pro rata of the eight million seven hundred sixty thousand (8,760,000) kilowatt-hours annual diminution above provided for.

The term "secondary energy" wherever used herein shall mean all electrical energy generated in one year (June 1 to May 31, inclusive), in excess of the amount of firm energy as hereinabove defined, available in such year.

GENERATING AGENCIES

(9) In accordance with designation heretofore made by the Secretary, generation of energy allocated to the allottee shall be effected by the company as agreed in Exhibit A annexed.

Disputes and disagreements between the allottee and the company generating energy for it, with respect to such generation, and/or the cost thereof, shall be determined by the Secretary unless otherwise specifically provided in this contract.

DELIVERY OF ELECTRICAL ENERGY

(10) (*a*) Energy shall be ready for delivery to the city and to the municipalities including those contracting under the last paragraph of article seven (7) hereof when the Secretary announces that one billion two hundered fifty million (1,250,000,000) kilowatt-hours of energy per year is ready for delivery.

(*b*) Energy shall be ready for delivery to the district when the Secretary announces that two billion (2,000,000,000) kilowatt-hours of energy per year is available, which date, however, shall not be sooner than one (1) year after energy is ready for delivery to the city, provided, however, that the time when energy is ready for delivery to the district may be advanced subject to the approval of the Secretary, should the district so request, and that in such case the city shall be compensated by the district for interest and depreciation on and maintenance and operation of its main transmission line in case the total energy available to the city is reduced below one billion two hundred fifty million (1,250,000,000) kilowatt-hours per annum, in the proportion that such kilowatt-hours available to the city is less than one billion two hundred fifty million (1,250,000,000).

(*c*) Energy shall be ready for delivery to the company and to the allottee when the Secretary announces that water capable of generating four billion two hundred forty million (4,240,000,000) kilowatt-hours of energy per year is available, which date, however, shall not be sooner than three (3) years after commencement of delivery of energy to the city and which shall not be until the water surface in Boulder Canyon Reservoir on August 1 immediately preceding has reached an elevation of eleven hundred fifty (1,150) feet above sea level (United States Geological Survey datum); provided, however,

that the Secretary may require the company and the allottee to assume their obligations to take and/or pay for Boulder Canyon energy in accordance with the provisions of this contract on the first day of the calendar month next following the date when the company's system maximum demand in kilowatts is equal to or greater than it was at any time during the twelve-month period immediately preceding the date when the city commences to obtain energy from Boulder Canyon power plant. "Maximum demand," as used in the sentence next preceeding, shall be defined as the average of the five largest half-hourly peaks during any single month, after deducting therefrom the amount of kilowatts the company may be temporarily carrying for any purpose other than supplying its own normal load.

(*d*) Upon written notification from the Secretary that generation equipment is ready for operation by it and water is available for generating energy therefrom, each lessee will be required to assume the operation and maintenance of its respective portion of the power plant, and thereafter the allottee shall not look to the United States for compensation for injury and/or damages of any kind which may in any manner arise out of the operation and maintenance of the portion of such plant leased to the company.

CHARGES TO BE PAID THE UNITED STATES

(11) In consideration of this contract, the allottee agrees (1) to pay the United States for the use of falling water for generation of energy for the allottee as follows:

(*a*) One and sixty-three hundredths mills ($0.00163) per kilowatt-hour (delivered at transmission voltage) for all firm energy allocated to it;

(*b*) One-half mill ($0.0005) per kilowatt-hour (delivered at transmission voltage) for secondary energy;

(2) To pay the United States, for credit to the company, on account of the use of the leased equipment as herein elsewhere provided; and

(3) To pay the United States, for credit to the company, on account of maintenance of said equipment in first-class operating condition, including repairs to and replacements of machinery; provided, however, that, if the expenditures for replacements shall exceed at any time the sum accumulated by the company as a depreciation reserve in accordance with rules and regulations prescribed by the Secretary, pursuant to the Boulder Canyon project act, less all amounts previously withdrawn for replacements, then the rates aforesaid shall be readjusted as hereinafter provided so as to reimburse the company for such excess expenditures within the term of this contract.

At the end of fifteen (15) years from the date of execution of said Exhibit A (April 26, 1930) and every ten (10) years thereafter, the above rates of payment for energy shall be readjusted upon demand of either party hereto, either upward or downward as to price, as the Secretary may find to be justified by competitive conditions at distributing points or competitive centers.

The rate for falling water for generation of firm energy, which shall be uniform for both lessees and the allottee, provided for by any such readjustment shall be arrived at by deducting from the price of

electrical energy justified by competitive conditions at distributing points or competitive centers—(1) all fixed and operating costs of transmission to such points; (2) all fixed and operating costs of such portion of the power-plant machinery as is to be operated and maintained by the several lessees, including the cost of repairs and replacements, together with such readjustment as to replacements as is provided for in paragraph 3 in this article; it being understood that such readjusted rates shall under no circumstances exceed the value of said energy, based upon competitive conditions at distributing points or competitive centers.

The charges agreed to be paid by the allottee to the United States, for credit to the company as generating agency, in this article, shall be such proportion of the cost incurred by such generating agency as the generating agency and the allottee may agree, or failing such agreement, as the Secretary may determine.

The term "cost," as used with reference to generating energy, shall include a proper proportionate allowance for amortization for the cost of machinery and equipment as provided in paragraph (*a*) of article 9 of Exhibit A hereof, and interest on the prepayments thereof made by the company, a proper proportionate part of any annuity set-up in accordance with regulations of the Secretary provided for in subdivision 3 of article sixteen (16) of Exhibit A hereof, and any additional expenditures made by the company with the approval of the Secretary, for the purpose of meeting the obligation of the company to make replacements; and a proper proportionate part of the actual outlay of the company for operating such machinery and equipment and keeping the same in repair, including reasonable overhead charges. The extent of the allowance for the several items in the event of disagreement between the company and the allottee, and the system of accounting therefor, shall be prescribed by the Secretary under uniform regulations as required by section 6 of the Boulder Canyon project act.

MONTHLY PAYMENTS AND PENALTIES

(12) The allottee shall pay monthly for energy in accordance with the rates established or provided for herein, and for the generation thereof as provided in article eleven (11).

When energy taken in any month is not in excess of one-twelfth (1/12) of the minimum annual obligation, bill for such month shall be computed at the rate for firm energy in effect when such energy was taken on the basis of the actual amount of energy used during such month. All energy used during any month in excess of one-twelfth (1/12) of the minimum annual obligation shall be paid for at the rate for secondary energy in effect when such energy was taken; provided, however, that the secondary rate shall not apply to any energy taken during any month unless and until an amount of energy equivalent to one-twelfth (1/12) of the minimum annual obligation has been taken for all months beginning with the month of June immediately preceding; provided, however, that the bill for the month of May shall not be less than the difference between the minimum annual payment, as provided in article thirteen (13) hereof, and the sum of the amounts charged for firm energy during the preceding eleven months. The United States will submit bills to the allottee by the fifth of each month immediately following the month during which the energy is gen-

erated, and payments shall be due on the first day of the month immediately succeeding. If such charges are not paid when due, a penalty of one per centum (1%) of the amount unpaid shall be added thereto, and thereafter an additional penalty of one per centum (1%) of the amount unpaid shall be added on the first day of each calendar month thereafter during such delinquency.

The monthly charge for generation of such energy to be credited to the generating agency shall be in such amount as may be determined in accordance with article eleven (11) hereof.

MINIMUM ANNUAL PAYMENTS

(13) The minimum quantity of firm energy which the allottee shall take and/or pay for each year (June 1 to May 31, inclusive), under the terms of this contract, and after the same is ready for delivery to the company, as provided in subdivision (*c*) of article ten (10) hereof, shall be two and seven-tenths per centum (2.7%) of all firm energy as defined in article eight (8) hereof, available in said year, except as reduced by ten per centum (10%) of one-half of amounts of firm energy allocated to the States of Arizona and Nevada, and contracted for by those States, or others, as provided in article fourteen (14) of said contract marked Exhibit A. The total payments made by the allottee for firm energy available in any year (June 1 to May 31, inclusive), whether any energy is taken by it or not, exclusive of its payments for credit to the generating agency, shall be not less than the number of kilowatt-hours of firm energy which the allottee is obligated to take and/or pay for during said year, multiplied by one and sixty-three hundredths mills ($0.00163), or multiplied by the adjusted rate of payment for firm energy in case the said rate is adjusted as provided in article eleven (11) hereof. For a fractional year at the beginning or end of the contract period, the minimum annual payment for firm energy shall be proportionately adjusted in the ratio that the number of days water is available for generation of energy in such fractional year bears to three hundred sixty-five (365); provided, that the minimum annual payment shall be reduced in case of interruptions or curtailment of delivery of water as provided in article sixteen (16) hereof.

The minimum annual payments made by the allottee for generation of such energy, to be credited to the generating agency, shall be determined in accordance with article eleven (11) hereof.

NO ENERGY TO BE DELIVERED WITHOUT PAYMENT

(14) Unless the written consent of the Secretary be first obtained, no electrical energy shall be generated for, or delivered to, the allottee if it shall be in arrears for more than twelve (12) months in the payment of any charge and/or penalty due or to become due the United States hereunder, whether for its own use or for credit to the generating agency.

CONTRACT MAY BE TERMINATED IN CASE OF BREACH

(15) If the allottee shall be in arrears for more than twelve (12) months in the payment of any charge and/or penalty due or to become due to the United States hereunder, and shall not have obtained an extension of time for payment thereof, or, if such extension be

obtained, has not made such payment within the time as extended, then the Secretary reserves the right forthwith upon written notice to the allottee to terminate this contract and dispose of the energy herein allocated as he may see fit; provided, he shall first give opportunity to the company to contract on terms and conditions to be prescribed by the Secretary, for such energy; and provided further, that such disposition shall be subject to the condition that the allottee shall have the right at any time within ten (10) years from the date of the first of the defaults or breaches for which the contract is terminated to become reinstated hereunder by payment to the United States of all arrearages and penalties, if any, together with any and all loss incurred by the United States by reason of such termination, and compensation to the contractor or contractors for equipment rendered idle by such reinstatement. In case of disagreement or dispute as to any of the items so to be paid the same shall be determined as provided in article twenty-one (21) hereof. Nothing contained in this contract shall relieve the allottee from the obligation to make the United States whole, for the period of this contract, for all loss and/or damage occasioned by the failure of the allottee to take and/or pay for energy as provided in this contract. The waiver of a breach of any of the provisions of this contract shall not be deemed to be a waiver of any other provisions thereof, or of a subsequent breach of such provision.

INTERRUPTIONS IN DELIVERY OF WATER

(16) The United States will deliver water continuously to each lessee in the quantity, in the manner, and at the times necessary for the generation of the energy which each of said lessees has the right and/or obligation to generate under this contract in accordance with the load requirements of each of said lessees, and of allottees for which the respective lessees are generating agencies, excepting only that such delivery shall be regulated so as not to interfere with the necessary use of said Hoover Dam and Boulder Canyon Reservoir for river regulation, improvement of navigation, flood control, irrigation, or domestic uses, and the satisfaction of present perfected rights in or to the waters of the Colorado River or its tributaries, in pursuance of Article VIII of the Colorado River compact, and this contract is made upon the express condition, and with the express covenant, that the rights of the allottee to the waters of the Colorado River or its tributaries are subject to, and controlled by, the Colorado River compact. The United States reserves the right temporarily to discontinue or reduce the delivery of water for the generation of energy at any time for the purpose of maintenance, repairs and/or replacements, or installation of equipment, and for investigations and inspections necessary thereto; provided, however, that the United States shall, except in case of emergency, give to the lessees reasonable notice in advance of such temporary discontinuance or reduction, and that the United States shall make such inspections and perform such maintenance and repair work after consultation with the lessees at such times and in such manner as will cause the least inconvenience to the lessees, and shall prosecute such work with diligence, and, without unnecessary delay, will resume delivery of water so discontinued or reduced. Should the delivery of water be discontinued or reduced below the amount required for the normal generation of firm

energy for the payment of which said allottee has hereby obligated itself, the total number of hours of such discontinuance or reduction in any year shall be determined by taking the sum of the number of hours during which the delivery of water is totally discontinued and the product of the number of hours during which the delivery of water is partially reduced and the percentage of said partial reduction below the actual quantity of water required by the lessees, severally, for the normal generation of firm energy. Total or partial reductions in the delivery of water which do not reduce the power output below the amount required at the time by such lessee for the normal generation of firm energy will not be considered in determining the total hours of discontinuance in any year. The minimum annual payment specified in article thirteen (13) hereof shall be reduced by the ratio that the total number of hours of such discontinuance bears to eight thousand seven hundred sixty (8,760). In no event shall any liability accrue against the United States, its officers, agents, and/or employees for any damage, direct or indirect, arising on account of drought, hostile diversion, act of God or of the public enemy, or other similar cause; nevertheless, interruptions in delivery of water occasioned by such causes shall be governed as hereinabove provided in this article.

MEASUREMENT OF ENERGY

(17) All energy shall be measured at generator voltage and suitable metering equipment shall be provided and installed by the United States for this purpose. Suitable correction shall be made in the amounts of energy as measured at generator voltage to cover step-up transformer losses and energy required for operation of station auxiliaries, in determining the amounts of energy delivered at transmission voltage as provided in this contract. The said meter equipment shall be maintained by and at the expense of the respective lessees. Meters shall be tested at any reasonable time upon the request of either the United States or a lessee, and in any event they shall be tested at least once each year. If the test discloses that the error of any meter exceeds one per centum (1%), such meter shall be adjusted so that the error does not exceed one-half of one per centum (½%). Meter equipment shall be tested by means of suitable testing equipment which will be provided by the United States, and which shall be calibrated by the United States Bureau of Standards as often as requested by any party hereto. Meters shall be kept sealed, and the seals shall be broken only in the presence of representatives of both the United States and the lessees, respectively, and likewise all tests of meter equipment shall be conducted only when representatives of both the United States and the respective lessees are present. In the event that energy furnished to the allottee at Hoover Dam is transmitted over lines of another contractor, the meters at Hoover Dam will record only the total amounts of energy delivered to the operators of main transmission lines and it will not be possible to determine from these meters the division of the energy between the various allottees and the operator. The allottee or the operator of said lines shall provide suitable meter equipment, satisfactory to the Secretary, at the point where the energy is delivered by the operator of said lines to the allottee, for determining the amounts of energy

delivered to the allottee at said point, and to these amounts there shall be added proper corrections to cover transformer and line losses in determining the amounts of energy furnished to the allottee at Hoover Dam. The Secretary's determination of said amounts shall be conclusive.

INSPECTION BY THE UNITED STATES

(18) The Secretary or his representatives shall have free access at all reasonable times to the books and records of the allottee relating to the disposal of electrical energy, with the right at any time during office hours to make copies of and from the same.

TRANSMISSION

(19) The company having, in article twenty-five (25) of Exhibit A hereof, undertaken that it shall transmit over its main transmission lines, constructed for carrying Boulder Canyon power, such power allocated to the allottee as it may desire to have transmitted over such lines, the allottee agrees to compensate the company therefor as may be mutually agreed upon between the company and the allottee. In the event that an operator of main transmission lines other than the company transmits the energy allocated to the allottee pursuant to Exhibit A, article twenty-five (25) (*c*), the obligation of the allottee under this paragraph shall apply for the benefit of such other operator as though it had been named herein instead of the company. In any event, disputes and disagreements between the allottee and the operator of main transmission lines shall be determined in accordance with article twenty-one (21) (*a*) hereof. Nothing herein contained, however, shall relieve the allottee of the obligation to pay the United States for energy allocated to the allottee whether transmitted or not.

DURATION OF CONTRACT

(20) This contract shall remain in effect until the expiration of a period of fifty (50) years from the date at which energy is ready for delivery to the city, as announced by the Secretary. The holder of any contract for electrical energy, including the allottee, not in default thereunder, shall be entitled to a renewal thereof upon such terms and conditions as may be authorized or required under the then existing laws and regulations, unless the property of such holder dependent for its usefulness on a continuation of the contract be purchased or acquired and such contractor be compensated for damages to its property, used and useful in the transmission and distribution of such electrical energy and not taken, resulting from the termination of the supply.

DISPUTES AND DISAGREEMENTS

(21) (*a*) Disputes or disagreements arising under this contract between the allottee and any lessee or other allottee shall be arbitrated by three arbitrators, except where otherwise provided in this contract. The allottee shall name one arbitrator, and the other disputant shall name one. These two shall name the third. If either disputant has notified the other that arbitration is demanded and that it has named an arbitrator, and if thereafter the other disputant fails to name an arbitrator for fifteen days, the Secretary, if requested

by either disputant, shall name such arbitrator, who shall proceed as though named by the disputant. The two arbitrators so named shall meet within five days after appointment of the second, and name the third. If they fail to do so, the Secretary will, on request by either disputant or arbitrator, name the third. A decision by any two of the three arbitrators shall be binding on the disputants and enforceable by court proceedings or by the Secretary in his discretion. Arbitration as herein provided, or the failure of the arbitrators to render a decision within six months of appointment of the third arbitrator, shall be a condition precedent to suit by either disputant against the other upon the matter in dispute.

(*b*) Disputes or disagreements between the United States and the allottee as to the interpretation or performance of the provisions of this contract shall be determined either by arbitration or court proceedings, the Secretary of the Interior being authorized to act for the United States in such proceedings. Whenever a controversy arises out of this contract, and the disputants agree to submit the matter to arbitration, the allottee shall name one arbitrator and the Secretary shall name one arbitrator, and the two arbitrators thus chosen shall elect three other arbitrators, but in the event of their failure to name all or any of the three arbitrators within five (5) days after their first meeting, such arbitrators, not so elected, shall be named by the senior judge of the United States Circuit Court of Appeals for the ninth circuit. The decision of any three of such arbitrators shall be a valid and binding award of the arbitrators.

USE OF PUBLIC AND RESERVED LANDS OF THE UNITED STATES

(22) The use is authorized of such public and reserved lands of the United States as may be necessary or convenient for the construction, operation, and maintenance of main transmission lines, to transmit electrical energy generated at Hoover Dam, together with the use of such public and reserved lands of the United States as may be designated by the Secretary, from time to time, for camp sites, residences for employees, warehouses, and other uses incident to the operation and maintenance of the power plant and incidental works.

PRIORITY OF CLAIMS OF THE UNITED STATES

(23) Claims of the United States arising out of this contract shall have priority over all others, secured or unsecured.

TRANSFER OF INTEREST IN CONTRACT

(24) No voluntary transfer of this contract, or of the rights hereunder, shall be made without the written approval of the Secretary; and any successor or assign of the rights of the allottee, whether by voluntary transfer, judicial sale, foreclosure sale, or otherwise, shall be subject to all the provisions of the Boulder Canyon project act and also subject to all the provisions and conditions of this contract to the same extent as though such successor or assign were the original contractor hereunder; provided, that a mortgage or trust deed or judicial sales made thereunder shall not be deemed voluntary transfers within the meaning of this article.

RULES AND REGULATIONS

(25) This contract is subject to such rules and regulations conforming to the Boulder Canyon project act as the Secretary may from time to time promulgate; provided, however, that no right of the allottee hereunder shall be impaired or obligation of the allottee hereunder shall be extended thereby; and provided further, that opportunity for hearing shall be afforded the allottee by the Secretary prior to promulgation thereof.

AGREEMENT SUBJECT TO COLORADO RIVER COMPACT

(26) This contract is made upon the express condition and with the express understanding that all rights hereunder shall be subject to and controlled by the Colorado River compact, being the compact or agreement signed at Santa Fe, N. Mex., November 24, 1922, pursuant to act of Congress approved August 19, 1921, entitled "An act to permit a compact or agreement between the States of Arizona, California, Colorado, Nevada, New Mexico, Utah, and Wyoming, respecting the disposition and apportionment of the waters of the Colorado River, and for other purposes," which compact was approved in section 13 (*a*) of the Boulder Canyon project act.

CONTINGENT UPON APPROPRIATIONS

(27) This contract is subject to appropriations being made by Congress from year to year of moneys sufficient to do the work provided for herein, and to there being sufficient moneys available in the Colorado River Dam fund to permit allotments to be made for the performance of such work. No liability shall accrue against the United States, its officers, agents, or employees, by reason of sufficient moneys not being so appropriated or on account of there not being sufficient moneys in the Colorado River Dam fund to permit of said allotments. This agreement is also subject to the condition that if for any other reason construction of Hoover Dam is not prosecuted to completion with reasonable diligence, then and in such event either party hereto may terminate its obligations hereunder upon one (1) year's written notice to the other party hereto.

TITLE TO REMAIN IN UNITED STATES

(28) As provided by section six (6) of the Boulder Canyon project act, the title to Hoover Dam, reservoir, plant, and incidental works shall forever remain in the United States.

REMEDIES UNDER CONTRACT NOT EXCLUSIVE

(29) Nothing contained in this contract shall be considered as in any manner abridging, limiting, or depriving the United States of any means of enforcing any remedy either at law or in equity for the breach of any of the provisions hereof which it would otherwise have.

MEMBER OF CONGRESS CLAUSE

(30) No Member of or Delegate to Congress or Resident Commissioner shall be admitted to any share or part of this contract, or to

any benefit that may arise therefrom. Nothing, however, herein contained shall be construed to extend to this contract if made with a corporation for its general benefit.

In witness whereof, the parties hereto have caused this contract to be executed in triplicate the day and year first above written.

Attest:

THE UNITED STATES OF AMERICA,
By RAY LYMAN WILBUR, *Secretary of the Interior.*

LOS ANGELES GAS & ELECTRIC CORPORATION,
By ADDISON B. DAY, *its President.*

Approved as to form:

PAUL OVERTON, *General Counsel.*
F. E. SEAVER, *Secretary.*

Attest:

[SEAL.]

And Southern California Edison Co. (Ltd.), as evidence of its approval of this contract, has caused its corporate name to be subscribed hereto by its officers thereunto duly authorized, as at the day and year first above written.

SOUTHERN CALIFORNIA EDISON CO. (LTD.),
By R. H. BALLARD, *President.*

Attest:

CLIFTON PETERS, *Secretary.*

Approved as to form:
ROY V. REPPY, *General Counsel.*
By G. E. TROWBRIDGE, *Attorney.*
11–16–31.

[SEAL.]

EXHIBIT A

Omitted. Consists of Appendix 2, supra.

[APPENDIX 5]

BOULDER CANYON PROJECT

CONTRACT FOR ELECTRICAL ENERGY

THE UNITED STATES
AND
THE SOUTHERN SIERRAS POWER CO.

November 5, 1931

CONTRACT FOR ELECTRICAL ENERGY

Article

CONTRACT FOR ELECTRICAL ENERGY

(1) This contract, made this 5th day of November, nineteen hundred thirty-one, pursuant to the act of Congress approved June 17, 1902 (32 Stat. 388), and acts amendatory thereof or supplementary thereto, all of which acts are commonly known and referred to as the reclamation law, and particularly pursuant to the act of Congress approved December 21, 1928 (45 Stat. 1057), designated the Boulder Canyon project act, between the United States of America, hereinafter referred to as the United States, acting for this purpose by Ray Lyman Wilbur, Secretary of the Interior, hereinafter styled the Secretary, and the Southern Sierras Power Co., a corporation organized and existing under and by virtue of the laws of the State of Wyoming, hereinafter styled the allottee.

Witnesseth:

EXPLANATORY RECITALS

(2) Whereas, for the purpose of controlling the floods, improving navigation, and regulating the flow of the Colorado River, providing for storage and for the delivery of the stored waters for reclamation of public lands and other beneficial uses exclusively within the United States, and for the generation of electrical energy, the Secretary, subject to the terms of the Colorado River compact, is authorized to construct, operate, and maintain a dam and incidental works in the main stream of the Colorado River at Black Canyon or Boulder Canyon, adequate to create a storage reservoir of a capacity of not less than twenty million acre-feet of water; also to construct, equip, operate, and maintain at or near said dam, or cause to be constructed, a complete plant and incidental structures suitable for the fullest economic development of electrical energy from the water discharged from said reservoir; and

(3) Whereas, after full consideration of the advantages of both the Black Canyon and Boulder Canyon dam sites, the Secretary has determined upon Black Canyon as the site of the aforesaid dam, hereinafter styled the Hoover Dam, and has determined that the revenues provided for by this contract, together with other contracts in accordance with the provisions of the Boulder Canyon project act, are adequate in his judgment to insure payment of all expenses of operation and maintenance of the Hoover Dam and appurtenant works incurred by the United States, and the repayment within fifty (50) years from the date of completion of said works of all amounts advanced to the Colorado River Dam fund under subdivision (*b*) of section 2 of the Boulder Canyon project act, together with interest thereon made reimbursable under said act; and

(4) Whereas the United States has entered into an agreement of date April 26, 1930, with the City of Los Angeles (hereinafter styled the city), and Southern California Edison Co. (Ltd.) (hereinafter styled the company), severally (both hereinafter referred to as the lessees) for the lease and the operation and maintenance of a Government-built power plant to be constructed at Hoover Dam, together with the right to generate electrical energy (a copy of which said lease

as amended by supplemental agreements of date May 28, 1930, and September 23, 1931, is attached hereto, marked Exhibit A, and by this reference made a part hereof); and whereas in said lease the Secretary has reserved the authority to, and in consideration of the execution thereof is authorized by each of the aforesaid lessees, severally, to contract with the other allottees named in the allocation set forth therein for the furnishing of energy to such allottees at transmission voltage in accordance with the allocation to each allottee, and the Secretary is therein granted by each lessee, severally, the power in accordance with the provisions thereof to enforce as against each lessee the rights to be acquired by such other allottees by contracts to be entered into with the United States; and whereas in said lease the company has agreed to generate energy allocated to the allottee; and

(5) Whereas the company, the allottee, Los Angeles Gas & Electric Corporation, and San Diego Consolidated Gas & Electric Co. have mutually agreed upon a division of all energy for which the company is obligated and/or entitled to take under said agreement marked Exhibit A, on the basis of seventy-five per centum (75%) thereof to the company, ten per centum (10%) thereof to the allottee, ten per per centum (10%) thereof to Los Angeles Gas & Electric Corporation, and five per centum (5%) thereof to San Diego Consolidated Gas & Electric Co., and the allottee is desirous of entering into a contract with the United States for the purchase of electrical energy to be generated at the power plant to be leased, as aforesaid, to the company;

(6) Now, therefore, in consideration of the mutual covenants herein contained, the parties hereto agree as follows, to wit:

ALLOCATION OF ELECTRICAL ENERGY

(7) The United States will cause electrical energy to be delivered to the allottee under and in pursuance of and subject to the provisions of the aforesaid lease, attached hereto as Exhibit A, throughout the period during which the company is obligated or entitled to take energy under said lease, in accordance with the following allocation, to wit:

Of firm energy, as defined in article eight (8) hereof:

A. To the State of Nevada, for use in Nevada, not exceeding eighteen per centum (18%) of said total firm energy.

B. To the State of Arizona, for use in Arizona, not exceeding eighteen per centum (18%) of said total firm energy. Should either of the States not take its full eighteen per centum (18%) allocation within a period of twenty (20) years hereof, the other may then contract for the energy not so taken up to four per centum (4%) of the total firm energy; provided, that the combined amount used by the two States shall not, at any time, exceed thirty-six per centum (36%) of such total firm energy.

C. To the Metropolitan Water District of Southern California for pumping Colorado River water into and in its aqueduct for the use of such district within the following limits:

(1) Thirty-six per centum (36%) of said total firm energy, plus

(2) All secondary energy developed at the Hoover Dam power plant as provided in article thirteen (13) hereof, plus

(3) So much of the firm energy allocated to the States, the city, the company, and the allottee, as may not be used by them. Energy allocated to the States, but not in use by them, shall be released to the district by the two lessees as hereinafter in this subdivision three (3) provided. Unless otherwise agreed upon by said lessees such release shall be made on the basis of one-half by the city, and one-half by the company and the allottee collectively; provided, however, that in any such case the allottee shall release ten per centum (10%) of all energy required to be released by the company and the allottee collectively.

(*a*) If the district makes a firm contract with the Secretary for the balance of the lease period for part or all of such unused State energy (subject to the first right of the States thereto) such contract shall be made effective upon two years' written notice to the Secretary, and compensation to the lessees, respectively, for main transmission line property rendered idle;

(*b*) If the district does not so make a firm contract for such energy, then energy allocated to the States but not in use by them, shall be released to the district upon not less than fifteen months' written notice to the Secretary and at such compensation as the district and such lessees, respectively, may agree upon, to cover cost and overhead of replacing energy which otherwise would have been received at the Pacific coast end of the main transmission lines by the lessees, respectively. Such cost shall include interest on and depreciation and operation and maintenance of the plant capacity while required for the generation of such substitute energy; and also appropriate allowance for interest on and maintenance and depreciation of plant capacity rendered idle because of cessation of generation of such substitute energy until such time as such plant capacity would otherwise have been installed by the lessees, respectively, for their own requirements. If the district and the respective lessees fail to agree on such compensation, such energy shall nevertheless be released to the district, and the disagreement shall be determined in accordance with article twenty-one (21) (*a*) hereof. Such determination shall include allowance for items of cost and overhead as specified in this paragraph. Pending such determination, energy so released shall be paid for by the district at the rate for firm energy but the determination of compensation under article twenty-one (21) (*a*) hereof shall not be controlled by such rate.

During any year beginning June 1, the district shall not use any secondary energy or any unused State energy, until it has first used subsequent to June 1, next preceding, an amount of firm energy equivalent to one-twelfth of the amount of firm energy it is obligated to take and/or pay for annually multiplied by the number of months elapsed since June 1 next preceding.

(4) If, due to temporary deficiency in secondary energy regularly used by the district, substitute energy is requested by the district in

excess of the energy made available under the foregoing subparagraph (3) (*b*) the city and/or the company and/or the allottee may release so much energy as may be practicable on the same terms as provided in subsection (3) (*b*) preceding.

D. To the municipalities of Anaheim, Beverly Hills, Burbank, Colton, Fullerton, Glendale, Newport Beach, Pasadena, Riverside, San Bernardino, and Santa Ana (referred to herein as "the municipalities"), six per centum (6%) in all, to be allocated between them as they may agree; but if no agreement is submitted to the Secretary on or before November 16, 1931, the Secretary shall determine the allocation of each.

E. To the City of Los Angeles, thirteen per centum (13%).

F. To Southern California Edison Co. (Ltd.), the Southern Sierras Power Co., the San Diego Consolidated Gas & Electric Co., and the Los Angeles Gas & Electric Corporation, referred to herein as "the companies," nine per centum (9%) in all, whereof ten per centum (10%) of said nine per centum (9%), being nine-tenths of one per centum (0.9 of 1%) of all firm energy, shall be taken and/or paid for by the allottee.

It is further agreed that—

(I) So much of the energy allocated to the States (thirty-six per centum (36%) of the firm energy) and not in use by them, or failing their use, by the district for the above purposes, shall be taken and/or paid for one-half by the city and one-half by the company and the allottee collectively, of which said latter one-half, ten per centum (10%) shall be taken and/or paid for by the allottee. In addition all firm energy allocated to the city (thirteen per centum (13%)) shall be taken and paid for by the city.

(II) All of the energy allocated to the municipalities may be contracted for in compliance with regulations of the Secretary, by any one or more of them, as they may agree, on or before November 16, 1931. So much of the energy allocated to the municipalities as is not so contracted for, or if contracted for, not used by them directly or under contract for municipal purposes and/or distribution to their inhabitants, shall be taken and paid for by the city.

(III) So much of the energy allocated to the Southern Sierras Power Co., the San Diego Consolidated Gas & Electric Co., and the Los Angeles Gas & Electric Corporation as is not firmly contracted for by them, severally, in compliance with regulations of the Secretary on or before November 16, 1931, shall be taken and paid for by the company.

(IV) If any allottee is permitted by the United States to divert water from the reservoir at a time when the reservoir is not spilling, in consequence of which the amount of energy which would have been utilized is diminished, such diminution shall be debited to the allocation of firm energy herein made to such allottee; and charge for the energy equivalent of such diversion shall be made, and the amount of energy which the allottee shall otherwise be obligated to take and/or pay for hereunder shall be correspondingly reduced.

The reservoir shall be considered as spilling whenever water is being discharged in excess of the amount used for the generation of power, whether such waste occurs over the spillway or otherwise.

(V) Each of the States of Arizona and Nevada may, from time to time within the period of the aforesaid lease, contract for energy

for use within such State in any amount until the total allocated, respectively, to each is in use as provided above; and may terminate such contract, or contracts, without prejudice to the right to again contract for such energy. All such contracts shall be executed with the Secretary. A contract requiring one thousand (1,000) horsepower (of maximum demand) or less may become effective or be terminated on six months' written notice of requirement or termination given the director by the State; provided, that the notice given shall be two years if in the twelve months preceding said notice of demand the total increment to such State has exceeded five thousand (5,000) horsepower of maximum demand or if in the twelve months preceding said notice of termination the decrement to such State has exceeded five thousand (5,000) horsepower of maximum demand. In all cases the director shall immediately transmit such notice to each lessee. Whenever the amount in use is in excess of five thousand (5,000) horsepower of maximum demand, the lessees and the allottee, respectively, shall be compensated for property rendered idle by use of such excess in such amount as the Secretary shall determine to be equitable. Firm energy not contracted for by the States shall be available for use by the district as herein elsewhere provided, and if not in use by the States and/or the district, shall be taken and paid for, one-half by the city and one-half by the company and the allottee, of which latter one-half the allottee shall take and/or pay for ten per centum (10%). No right which may be available to a State under section five (5) (*c*) of the Boulder Canyon project act to execute a firm contract for electrical energy for use within the State shall be impaired by any provision of this contract.

Of secondary energy.

It is further agreed that the district shall have the right to purchase and use all secondary energy as provided in article eight (8) and article thirteen (13) hereof for the purposes stated in the first paragraph of subdivision (C) of this article. The city shall have the right to purchase and use one-half of all secondary energy not used by the district. The company and the allottee shall also have the right to purchase and use one-half of all secondary energy not used by the district, of which said one-half the allottee shall have the right to purchase and use ten per centum (10%). Any such energy not used by one lessee shall be available for the time being to the other lessee; provided, however, that of any such energy available to the company the allottee shall be entitled to purchase and use ten per centum (10%). If secondary energy is not taken by the district, the city, the company, and/or the allottee, then and in such event the United States reserves the right to take, use, and dispose of such energy, from time to time, as it sees fit, giving credit therefor as provided in article twelve (12) of Exhibit A hereof.

Of firm energy allocated to but not used by the district.

It is further agreed that in the event the district shall fail for any reason to use all or any of the firm energy herein allotted to it for the only purpose for which said firm energy is allotted to it, that is, for pumping water into and in its aqueduct, then the Secretary shall dispose of such unused energy until required by the district for said purpose, crediting on the district's obligation the proceeds

of such disposition as received; provided, however, that no disposition of such firm energy shall be made by the Secretary without first giving to a successor to the district which may undertake to build or maintain a Colorado River Aqueduct the opportunity to take said firm energy for the same purpose and under the same terms as those to which the district was obligated; and provided further, that in the event no such successor takes said firm energy as provided above, then no disposition of such firm energy shall be made by the Secretary without first giving to the city, the company, and the allottee the right to contract for such energy on equal terms and conditions to be prescribed by the Secretary. In such case the city shall have the right to contract for one-half of such energy, together with such portion of the remainder as the company and the allottee shall not elect to take, and the company and the allottee shall have the right to contract for one-half of such energy, together with such portion of the remainder as the city shall not elect to take; provided, that of the amount of such energy which the company and the allottee jointly shall be entitled to take hereunder, the allottee shall have the right to contract for ten per centum (10%).

Of firm energy not hereinbefore disposed of.

It is further agreed that the United States reserves the right, in case the dam which it erects provides a maximum water surface elevation in excess of one thousand two hundred twenty-two (1,222) feet above sea level (United States Geological Survey datum), and thereby increases the quantity of firm energy above the quantity of four billion two hundred forty million (4,240,000,000) kilowatt-hours allocated above, to dispose of such increase, but not to exceed ninety million (90,000,000) kilowatt-hours per year (June 1 to May 31, inclusive), to any municipality or municipalities by firm contract executed with the Secretary on or before November 16, 1931. Such disposition shall be without prejudice to any provision of this contract or of the allocation above referred to. So much of such additional energy as is not so contracted for shall be taken and paid for by the city. Generation of such additional energy shall in any event be effected by the city.

FIRM AND SECONDARY ENERGY DEFINED

(8) The amount of firm energy for the first year of operation (June 1 to May 31, inclusive), following the date of the completion of the dam as announced by the Secretary, shall be defined as being four billion two hundred forty million (4,240,000,000) kilowatt-hours at transmission voltage. For every subsequent year the amount defined as firm energy shall be decreased by eight million seven hundred sixty thousand (8,760,000) kilowatt-hours from that of the previous year. Nevertheless, if it be determined by the Secretary that the rate of decrease of kilowatt-hours per year as above stated is not in accord with actual conditions, the Secretary reserves the right to fix a lesser rate for any year (June 1 to May 31, inclusive) in advance.

If, by reason of international obligations arising through treaty or otherwise subsequent to the effective date of this contract, or by reason of interference with the progress of construction and/or operation of the dam as provided for and contemplated by this contract, or by reason of other contingencies not now foreseen, the amount of

firm energy available through the release of water from the Boulder Canyon Reservoir shall in fact be less than the amount of firm energy as above defined, then in any such event the obligation of the allottee to take electrical energy shall be reduced in an amount corresponding to such change. If for any reason the United States shall be wholly unable to fulfill its obligations hereunder in respect of the delivery of water, then the allottee may terminate this contract.

If the dam erected by the United States provides a maximum water surface elevation in excess of 1,222 feet above sea level (United States Geological Survey datum), the United States reserves the right to dispose of additional firm energy thereby made available not to exceed ninety million (90,000,000) kilowatt-hours per year, subject to pro rata of the eight million seven hundred sixty thousand (8,760,000) kilowatt-hours annual diminution above provided for.

The term "secondary energy" wherever used herein shall mean all electrical energy generated in one year (June 1 to May 31, inclusive), in excess of the amount of firm energy as hereinabove defined, available in such year.

GENERATING AGENCIES

(9) In accordance with designation heretofore made by the Secretary, generation of energy allocated to the allottee shall be effected by the company as agreed in Exhibit A annexed.

Disputes and disagreements between the allottee and the company generating energy for it, with respect to such generation, and/or the cost thereof, shall be determined by the Secretary unless otherwise specifically provided in this contract.

DELIVERY OF ELECTRICAL ENERGY

(10) (*a*) Energy shall be ready for delivery to the city and to the municipalities, including those contracting under the last paragraph of article seven (7) hereof, when the Secretary announces that one billion two hundred fifty million (1,250,000,000) kilowatt-hours of energy per year is ready for delivery.

(*b*) Energy shall be ready for delivery to the district when the Secretary announces that two billion (2,000,000,000) kilowatt-hours of energy per year is available, which date, however, shall not be sooner than one (1) year after energy is ready for delivery to the city; provided, however, that the time when energy is ready for delivery to the district may be advanced subject to the approval of the Secretary, should the district so request, and that in such case the city shall be compensated by the district for interest and depreciation on and maintenance and operation of its main transmission line in case the total energy available to the city is reduced below one billion two hundred fifty million (1,250,000,000) kilowatt-hours per annum, in the proportion that such kilowatt-hours available to the city is less than one billion two hundred fifty million (1,250,000,000).

(*c*) Energy shall be ready for delivery to the company and to the allottee when the Secretary announces that water capable of generating four billion two hundred forty million (4,240,000,000) kilowatt-hours of energy per year is available, which date, however, shall not be sooner than three (3) years after commencement of delivery of energy to the city and which shall not be until the water surface in

Boulder Canyon Reservoir on August 1 immediately preceding has reached an elevation of eleven hundred fifty (1,150) feet above sea level (United States Geological Survey datum); provided, however, that the Secretary may require the company and the allottee to assume their obligations to take and/or pay for Boulder Canyon energy in accordance with the provisions of this contract on the first day of the calendar month next following the date when the company's system maximum demand in kilowatts is equal to or greater than it was at any time during the twelve-month period immediately preceding the date when the city commences to obtain energy from Boulder Canyon power plant. "Maximum demand," as used in the sentence next preceding, shall be defined as the average of the five largest half-hourly peaks during any single month, after deducting therefrom the amount of kilowatts the company may be temporarily carrying for any purpose other than supplying its own normal load.

(*d*) Upon written notification from the Secretary that generation equipment is ready for operation by it and water is available for generating energy therefrom, each lessee will be required to assume the operation and maintenance of its respective portion of the power plant, and thereafter the allottee shall not look to the United States for compensation for injury and/or damages of any kind which may in any manner arise out of the operation and maintenance of the portion of such plant leased to the company.

CHARGES TO BE PAID THE UNITED STATES

(11) In consideration of this contract, the allottee agrees (1) to pay the United States for the use of falling water for generation of energy for the allottee as follows:

(*a*) One and sixty-three hundredths mills ($0.00163) per kilowatt-hour (delivered at transmission voltage) for all firm energy allocated to it;

(*b*) One-half mill ($0.0005) per kilowatt-hour (delivered at transmission voltage) for secondary energy;

(2) To pay the United States, for credit to the company, on account of the use of the leased equipment as herein elsewhere provided; and

(3) To pay the United States, for credit to the company, on account of maintenance of said equipment in first-class operating condition, including repairs to and replacements of machinery; provided, however, that, if the expenditures for replacements shall exceed at any time the sum accumulated by the company as a depreciation reserve in accordance with rules and regulations prescribed by the Secretary, pursuant to the Boulder Canyon project act, less all amounts previously withdrawn for replacements, then the rates aforesaid shall be readjusted as hereinafter provided so as to reimburse the company for such excess expenditures within the term of this contract.

At the end of fifteen (15) years from the date of execution of said Exhibit A (April 26, 1930) and every ten (10) years thereafter, the above rates of payment for energy shall be readjusted upon demand of either party hereto, either upward or downward as to price, as the Secretary may find to be justified by competitive conditions at distributing points or competitive centers.

The rate for falling water for generation of firm energy, which shall be uniform for both lessees and the allottee, provided for by any such readjustment, shall be arrived at by deducting from the price of elec-

trical energy justified by competitive conditions at distributing points or competitive centers—(1) all fixed and operating costs of transmission to such points; (2) all fixed and operating costs of such portion of the power-plant machinery as is to be operated and maintained by the several lessees, including the cost of repairs and replacements, together with such readjustment as to replacements as is provided for in paragraph 3 in this article; it being understood that such readjusted rates shall under no circumstances exceed the value of said energy, based upon competitive conditions at distributing points or competitive centers.

The charges agreed to be paid by the allottee to the United States, for credit to the company as generating agency, in this article, shall be such proportion of the cost incurred by such generating agency as the generating agency and the allottee may agree, or failing such agreement, as the Secretary may determine.

The term "cost," as used with reference to generating energy, shall include a proper proportionate allowance for amortization for the cost of machinery and equipment as provided in paragraph (*a*) of article 9 of Exhibit A hereof, and interest on the prepayments thereof made by the company, a proper proportionate part of any annuity set-up in accordance with regulations of the Secretary provided for in subdivision 3 of article sixteen (16) of Exhibit A hereof, and any additional expenditures made by the company with the approval of the Secretary, for the purpose of meeting the obligation of the company to make replacements; and a proper proportionate part of the actual outlay of the company for operating such machinery and equipment and keeping the same in repair, including reasonable overhead charges. The extent of the allowance for the several items in the event of disagreement between the company and the allottee, and the system of accounting therefor, shall be prescribed by the Secretary under uniform regulations as required by section 6 of the Boulder Canyon project act.

MONTHLY PAYMENTS AND PENALTIES

(12) The allottee shall pay monthly for energy in accordance with the rates established or provided for herein, and for the generation thereof as provided in article eleven (11).

When energy taken in any month is not in excess of one-twelfth (1/12) of the minimum annual obligation, bill for such month shall be computed at the rate for firm energy in effect when such energy was taken on the basis of the actual amount of energy used during such month. All energy used during any month in excess of one-twelfth (1/12) of the minimum annual obligation shall be paid for at the rate for secondary energy in effect when such energy was taken; provided, however, that the secondary rate shall not apply to any energy taken during any month unless and until an amount of energy equivalent to one-twelfth (1/12) of the minimum annual obligation has been taken for all months beginning with the month of June immediately preceding; provided, however, that the bill for the month of May shall not be less than the difference between the minimum annual payment, as provided in article thirteen (13) hereof, and the sum of the amounts charged for firm energy during the preceding eleven months. The United States will submit bills to the allottee by the fifth of each month immediately following the month during which the energy is

generated, and payments shall be due on the first day of the month immediately succeeding. If such charges are not paid when due a penalty of one per centum (1%) of the amount unpaid shall be added thereto, and thereafter an additional penalty of one per centum (1%) of the amount unpaid shall be added on the first day of each calendar month thereafter during such delinquency.

The monthly charge for generation of such energy to be credited to the generating agency shall be in such amount as may be determined in accordance with article eleven (11) hereof.

MINIMUM ANNUAL PAYMENT

(13) The minimum quantity of firm energy which the allottee shall take and/or pay for each year (June 1 to May 31, inclusive), under the terms of this contract, and after the same is ready for delivery to the company, as provided in subdivision (*c*) of article ten (10) hereof, shall be two and seven-tenths per centum (2.7%) of all firm energy as defined in article eight (8) hereof, available in said year, except as reduced by ten per centum (10%) of one-half of amounts of firm energy allocated to the States of Arizona and Nevada, and contracted for by those States or others as provided in article fourteen (14) of said contract marked "Exhibit A." The total payments made by the allottee for firm energy available in any year (June 1 to May 31, inclusive), whether any energy is taken by it or not, exclusive of its payments for credit to the generating agency, shall be not less than the number of kilowatt-hours of firm energy which the allottee is obligated to take and/or pay for during said year, multiplied by one and sixty-three hundredths mills ($0.00163), or multiplied by the adjusted rate of payment for firm energy in case the said rate is adjusted as provided in article eleven (11) hereof. For a fractional year at the beginning or end of the contract period the minimum annual payment for firm energy shall be proportionately adjusted in the ratio that the number of days water is available for generation of energy in such fractional year bears to three hundred sixty-five (365); provided, that the minimum annual payment shall be reduced in case of interruptions or curtailment of delivery of water as provided in article sixteen (16) hereof.

The minimum annual payments made by the allottee for generation of such energy, to be credited to the generating agency, shall be determined in accordance with article eleven (11) hereof.

NO ENERGY TO BE DELIVERED WITHOUT PAYMENT

(14) Unless the written consent of the Secretary be first obtained, no electrical energy shall be generated for, or delivered to, the allottee if it shall be in arrears for more than twelve (12) months in the payment of any charge and/or penalty due or to become due the United States hereunder, whether for its own use or for credit to the generating agency.

CONTRACT MAY BE TERMINATED IN CASE OF BREACH

(15) If the allottee shall be in arrears for more than twelve (12) months in the payment of any charge and/or penalty due or to become due to the United States hereunder, and shall not have obtained an extension of time for payment thereof, or if such extension be

obtained, has not made such payment within the time as extended, then the Secretary reserves the right forthwith upon written notice to the allottee to terminate this contract and dispose of the energy herein allocated as he may see fit; provided, he shall first give opportunity to the company to contract on terms and conditions to be prescribed by the Secretary for such energy; and provided further, that such disposition shall be subject to the condition that the allottee shall have the right at any time within ten (10) years from the date of the first of the defaults or breaches for which the contract is terminated, to become reinstated hereunder by payment to the United States of all arrearages and penalties, if any, together with any and all loss incurred by the United States by reason of such termination, and compensation to the contractor or contractors for equipment rendered idle by such reinstatement. In case of disagreement or dispute as to any of the items so to be paid the same shall be determined as provided in article twenty-one (21) hereof. Nothing contained in this contract shall relieve the allottee from the obligation to make the United States whole, for the period of this contract, for all loss and/or damage occasioned by the failure of the allottee to take and/or pay for energy as provided in this contract. The waiver of a breach of any of the provisions of this contract shall not be deemed to be a waiver of any other provisions hereof, or of a subsequent breach of such provision.

INTERRUPTIONS IN DELIVERY OF WATER

(16) The United States will deliver water continuously to each lessee in the quantity, in the manner, and at the times necessary for the generation of the energy which each of said lessees has the right and/or obligation to generate under this contract in accordance with the load requirements of each of said lessees, and of allottees for which the respective lessees are generating agencies, excepting only that such delivery shall be regulated so as not to interfere with the necessary use of said Hoover Dam and Boulder Canyon Reservoir for river regulation, improvement of navigation, flood control, irrigation, or domestic uses, and the satisfaction of present perfected rights in or to the waters of the Colorado River, or its tributaries, in pursuance of Article VIII of the Colorado River compact, and this contract is made upon the express condition, and with the express covenant, that the rights of the allottee to the waters of the Colorado River, or its tributaries, are subject to and controlled by the Colorado River compact. The United States reserves the right temporarily to discontinue or reduce the delivery of water for the generation of energy at any time for the purpose of maintenance, repairs, and/or replacements, or installation of equipment, and for investigations and inspections necessary thereto; provided, however, that the United States shall, except in case of emergency, give to the lessees reasonable notice in advance of such temporary discontinuance or reduction, and that the United States shall make such inspections and perform such maintenance and repair work after consultation with the lessees at such times, and in such manner as will cause the least inconvenience to the lessees, and shall prosecute such work with diligence, and without unnecessary delay, will resume delivery of water so discontinued or reduced. Should the delivery of water be discontinued or reduced

below the amount required for the normal generation of firm energy for the payment of which said allottee has hereby obligated itself, the total number of hours of such discontinuance or reduction in any year shall be determined by taking the sum of the number of hours during which the delivery of water is totally discontinued, and the product of the number of hours during which the delivery of water is partially reduced and the percentage of said partial reduction below the actual quantity of water required by the lessees, severally, for the normal generation of firm energy. Total or partial reductions in the delivery of water which do not reduce the power output below the amount required at the time by such lessee for the normal generation of firm energy, will not be considered in determining the total hours of discontinuance in any year. The minimum annual payment specified in article thirteen (13) hereof shall be reduced by the ratio that the total number of hours of such discontinuance bears to eight thousand seven hundred sixty (8,760). In no event shall any liability accrue against the United States, its officers, agents, and/or employees, for any damage, direct or indirect, arising on account of drought, hostile diversion, act of God, or of the public enemy, or other similar cause; nevertheless interruptions in delivery of water occasioned by such causes shall be governed as hereinabove provided in this article

MEASUREMENT OF ENERGY

(17) All energy shall be measured at generator voltage and suitable metering equipment shall be provided and installed by the United States for this purpose. Suitable correction shall be made in the amounts of energy as measured at generator voltage to cover step-up transformer losses and energy required for operation of station auxiliaries, in determining the amounts of energy delivered at transmission voltage as provided in this contract. The said meter equipment shall be maintained by and at the expense of the respective lessees. Meters shall be tested at any reasonable time upon the request of either the United States or a lessee, and in any event they shall be tested at least once each year, If the test discloses that the error of any meter exceeds one per centum (1%), such meter shall be adjusted so that the error does not exceed one-half of one per centum (½%). Meter equipment shall be tested by means of suitable testing equipment which will be provided by the United States, and which shall be calibrated by the United States Bureau of Standards as often as requested by any party hereto. Meters shall be kept sealed, and the seals shall be broken only in the presence of representatives of both the United States and the lessees, respectively, and likewise all tests of meter equipment shall be conducted only when representatives of both the United States and the respective lessees are present. In the event that energy furnished to the allottee at Hoover Dam is transmitted over lines of another contractor, the meters at Hoover Dam will record only the total amounts of energy delivered to the operators of main transmission lines and it will not be possible to determine from those meters the division of the energy between the various allottees and the operator. The allottee or the operator of said lines shall provide suitable meter equipment, satisfactory to the Secretary, at the point where the energy is delivered by the operator of said lines to the allottee, for determining the amounts of energy

delivered to the allottee at said point, and to these amounts there shall be added proper corrections to cover transformer and line losses in determining the amounts of energy furnished to the allottee at Hoover Dam. The Secretary's determination of said amounts shall be conclusive.

INSPECTION BY THE UNITED STATES

(18) The Secretary or his representatives shall have free access at all reasonable times to the books and records of the allottee relating to the disposal of electrical energy, with the right at any time during office hours to make copies of and from the same.

TRANSMISSION

(19) The company having, in article twenty-five (25) of Exhibit A hereof, undertaken that it shall transmit over its main transmission lines, constructed for carrying Boulder Canyon power, such power allocated to the allottee as it may desire to have transmitted over such lines, the allottee agrees to compensate the company therefor as may be mutually agreed upon between the company and the allottee. In the event that an operator of main transmission lines other than the company transmits the energy allocated to the allottee pursuant to Exhibit A, article (25) (*c*), the obligation of the allottee under this paragraph shall apply for the benefit of such other operator as though it had been named herein instead of the company. In any event, disputes and disagreements between the allottee and the operator of main transmission lines shall be determined in accordance with article twenty-one (21) (*a*) hereof. Nothing herein contained, however, shall relieve the allottee of the obligation to pay the United States for energy allocated to the allottee whether transmitted or not.

DURATION OF CONTRACT

(20) This contract shall remain in effect until the expiration of a period of fifty (50) years from the date at which energy is ready for delivery to the city, as announced by the Secretary. The holder of any contract for electrical energy, including the allottee, not in default thereunder, shall be entitled to a renewal thereof upon such terms and conditions as may be authorized or required under the then existing laws and regulations, unless the property of such holder dependent for its usefulness on a continuation of the contract be purchased or acquired and such contractor be compensated for damages to its property, used and useful in the transmission and distribution of such electrical energy and not taken, resulting from the termination of the supply.

DISPUTES AND DISAGREEMENTS

(21) (*a*) Disputes or disagreements arising under this contract between the allottee and any lessee or other allottee shall be arbitrated by three arbitrators, except where otherwise provided in this contract. The allottee shall name one arbitrator and the other disputant shall name one. These two shall name the third. If either disputant has notified the other that arbitration is demanded and that it has named an arbitrator, and if thereafter the other disputant fails to name an arbitrator for fifteen days, the Secretary, if requested by either dis-

putant, shall name such arbitrator, who shall proceed as though named by the disputant. The two arbitrators so named shall meet within five days after appointment of the second and name the third. If they fail to do so, the Secretary will, on request by either disputant or arbitrator, name the third. A decision by any two of the three arbitrators shall be binding on the disputants and enforceable by court proceedings or by the Secretary in his discretion. Arbitration as herein provided, or the failure of the arbitrators to render a decision within six months of appointment of the third arbitrator, shall be a condition precedent to suit by either disputant against the other upon the matter in dispute.

(*b*) Disputes or disagreements between the United States and the allottee as to the interpretation or performance of the provisions of this contract shall be determined either by arbitration or court proceedings, the Secretary of the Interior being authorized to act for the United States in such proceedings. Whenever a controversy arises out of this contract, and the disputants agree to submit the matter to arbitration, the allottee shall name one arbitrator and the Secretary shall name one arbitrator, and the two arbitrators thus chosen shall elect three other arbitrators, but in the event of their failure to name all or any of the three arbitrators within five (5) days after their first meeting, such arbitrators, not so elected, shall be named by the senior judge of the United States Circuit Court of Appeals for the Ninth Circuit. The decision of any three of such arbitrators shall be a valid and binding award of the arbitrators.

USE OF PUBLIC AND RESERVED LANDS OF THE UNITED STATES

(22) The use is authorized of such public and reserved lands of the United States as may be necessary or convenient for the construction, operation, and maintenance of main transmission lines, to transmit electrical energy generated at Hoover Dam, together with the use of such public and reserved lands of the United States as may be designated by the Secretary, from time to time, for camp sites, residence for employees, warehouses, and other uses incident to the operation and maintenance of the power plant and incidental works.

PRIORITY OF CLAIMS OF THE UNITED STATES

(23) Claims of the United States arising out of this contract shall have priority over all others, secured or unsecured.

TRANSFER OF INTEREST IN CONTRACT

(24) No voluntary transfer of this contract, or of the rights hereunder, shall be made without the written approval of the Secretary; and any successor or assign of the rights of the allottee, whether by voluntary transfer, judicial sale, foreclosure sale, or otherwise, shall be subject to all the provisions of the Boulder Canyon project act and also subject to all the provisions and conditions of this contract to the same extent as though such successor or assign were the original contractor hereunder; provided, that a mortgage or trust deed or judicial sales made thereunder shall not be deemed voluntary transfers within the meaning of this article.

RULES AND REGULATIONS

(25) This contract is subject to such rules and regulations conforming to the Boulder Canyon project act as the Secretary may from time to time promulgate; provided, however, that no right of the allottee hereunder shall be impaired or obligation of the allottee hereunder shall be extended thereby; and provided further, that opportunity for hearing shall be afforded the allottee by the Secretary prior to promulgation thereof.

AGREEMENT SUBJECT TO COLORADO RIVER COMPACT

(26) This contract is made upon the express condition and with the express understanding that all rights hereunder shall be subject to and controlled by the Colorado River compact, being the compact or agreement signed at Santa Fe, N. Mex., November 24, 1922, pursuant to act of Congress approved August 19, 1921, entitled "An act to permit a compact or agreement between the States of Arizona, California, Colorado, Nevada, New Mexico, Utah, and Wyoming, respecting the disposition and apportionment of the waters of the Colorado River, and for other purposes," which compact was approved in section 13 (*a*) of the Boulder Canyon project act.

CONTINGENT UPON APPROPRIATIONS

(27) This contract is subject to appropriations being made by Congress from year to year of moneys sufficient to do the work provided for herein, and to there being sufficient moneys available in the Colorado River Dam fund to permit allotments to be made for the performance of such work. No liability shall accrue against the United States, its officers, agents, or employees, by reason of sufficient moneys not being so appropriated or on account of there not being sufficient moneys in the Colorado River Dam fund to permit of said allotments. This agreement is also subject to the condition that if for any other reason construction of Hoover Dam is not prosecuted to completion with reasonable diligence, then and in such event either party hereto may terminate its obligations hereunder upon one (1) year's written notice to the other party hereto.

TITLE TO REMAIN IN UNITED STATES

(28) As provided by section six (6) of the Boulder Canyon project act, the title to Hoover Dam, reservoir, plant, and incidental works shall forever remain in the United States.

REMEDIES UNDER CONTRACT NOT EXCLUSIVE

(29) Nothing contained in this contract shall be construed as in any manner abridging, limiting, or depriving the United States of any means of enforcing any remedy either at law or in equity for the breach of any of the provisions hereof which it would otherwise have.

MEMBER OF CONGRESS CLAUSE

(30) No Member of or Delegate to Congress or Resident Commissioner shall be admitted to any share or part of this contract, or to any benefit that may arise therefrom. Nothing, however, herein

contained shall be construed to extend to this contract if made with a corporation for its general benefit.

In witness whereof, the parties hereto have caused this contract to be executed the day and year first above written.

THE UNITED STATES OF AMERICA,
Attest: By RAY LYMAN WILBUR,
Secretary of the Interior.

SOUTHERN SIERRAS POWER CO.,
Attest: By A. B. WEST, *its President.*
H. DEWES, *its Assistant Secretary.*

Legal features approved:
COIL, *General Counsel.*

[SEAL.]

And Southern California Edison Co. (Ltd.), as evidence of its approval of this contract, has caused its corporate name to be subscribed hereto by its officers thereunto duly authorized, as at the day and year first above written.

SOUTHERN CALIFORNIA EDISON CO. (LTD.),
By R. H. BALLARD, *President.*

Attest:
CLIFTON PETERS, [SEAL.]
Secretary.

Approved as to form:
ROY V. REPPY, *General Counsel.*
By G. E. TROWBRIDGE, *Attorney.*

11–12–31.

EVIDENCE OF AUTHORITY TO SIGN CORPORATE INSTRUMENTS

I, W. S. FISHER, secretary of the Southern Sierras Power Co., a corporation organized and existing under the laws of the State of Wyoming, do hereby certify that at a duly called meeting of the Board of Directors of said company, at which a quorum of said directors was present, held at Denver, Colo., the 6th day of May, 1931, a resolution was adopted, of which the following is a correct copy:

"*Whereas* negotiations concerning the allocation of power to be developed at the Boulder Canyon project of the United States Government have been concluded and a satisfactory contract agreed upon between the representatives of the Department of the Interior of the United States and the executive officers of our company; and

"*Whereas* it now seems desirable to secure a definite contract concerning the allocation of power, both firm and secondary, to our company;

"*Now, therefore, be it resolved*, by the Board of Directors of the Southern Sierras Power Co., That the president of this company be and he is hereby authorized and directed to conclude a contract between the Southern Sierras Power Co. and the United States of America providing for the allocation of power, both firm and secondary, to this company from the Boulder Canyon power project now being constructed by the United States of America, said contract to contain such terms, covenants, and conditions as may be deemed proper and desirable by the president of this company;

"*Be it further resolved,* That the president, or one of the vice presidents, of this company be and he is hereby authorized and directed to execute such contract in the name of this company and as the act and deed of this company, and that the secretary, or one of the assistant secretaries, of this company be and he is hereby authorized and directed to affix the corporate seal of this company to such contract and duly attest the same by his signature."

I further certify that on the 5th day of November, 1931, the above resolution was still in force, and that on the said 5th day of November, 1931, A. B. West was the president of said company.

In witness whereof I have hereunto set my hand and affixed the seal of said company this 9th day of November, 1931.

W. S. FISHER,
Secretary.

[SEAL.]

EXHIBIT A

Omitted. Consists of Appendix 2, supra.

[APPENDIX 6]

BOULDER CANYON PROJECT

CONTRACT FOR ELECTRICAL ENERGY

THE UNITED STATES
AND
THE CITY OF PASADENA
September 29, 1931

CONTRACT FOR ELECTRICAL ENERGY

Article

CONTRACT FOR ELECTRICAL ENERGY

(1) This contract, made this 29th day of September, nineteen hundred thirty-one, pursuant to the act of Congress approved June 17, 1902 (32 Stat. 388), and acts amendatory thereof or supplementary thereto, all of which acts are commonly known and referred to as the reclamation law, and particularly pursuant to the act of Congress approved December 21, 1928 (45 Stat. 1057), designated the Boulder Canyon project act, between the United States of America, hereinafter referred to as the United States, acting for this purpose by Ray Lyman Wilbur, Secretary of the Interior, hereinafter styled the Secretary, and the City of Pasadena, a municipal corporation, organized and existing under and by virtue of the laws of the State of California, hereinafter styled the municipality.

Witnesseth:

EXPLANATORY RECITALS

(2) Whereas, for the purpose of controlling the floods, improving navigation, and regulating the flow of the Colorado River, providing for storage and for the delivery of the stored waters for reclamation of public lands and other beneficial uses exclusively within the United States, and for the generation of electrical energy, the Secretary, subject to the terms of the Colorado River compact, is authorized to construct, operate, and maintain a dam and incidental works in the main stream of the Colorado River at Black Canyon or Boulder Canyon, adequate to create a storage reservoir of a capacity of not less than twenty million acre-feet of water; also to construct, equip, operate, and maintain at or near said dam, or cause to be constructed a complete plant and incidental structure suitable for the fullest economic development of electrical energy from the water discharged from said reservoir; and

(3) Whereas, after full consideration of the advantages of both the Black Canyon and Boulder Canyon dam sites, the Secretary has determined upon Black Canyon as the site of the aforesaid dam, hereinafter styled the Hoover Dam, and has determined that the revenues provided for by this contract, together with other contracts in accordance with the provisions of the Boulder Canyon project act, are adequate in his judgment to insure payment of all expenses of operation and maintenance of the Hoover Dam and appurtenant works incurred by the United States, and the repayment within fifty (50) years from the date of completion of said works of all amounts advanced to the Colorado River Dam fund under subdivision (*b*) of section 2 of the Boulder Canyon project act, together with interest thereon made reimbursable under said act; and

(4) Whereas, the United States has entered into an agreement of date April 26, 1930, with the City of Los Angeles (hereinafter styled the city) and Southern California Edison Co. (Ltd.) (hereinafter styled the company), severally (both hereinafter referred to as the lessees) for the lease, and the operation and maintenance of a Government-built power plant to be constructed at Hoover Dam, together with the right to generate electrical energy (a copy of which

said lease as amended by supplemental agreements of date May 28, 1930, and September 23, 1931, is attached hereto marked Exhibit A, and by this reference made a part hereof); and whereas in said lease the Secretary has reserved the authority to, and in consideration of the execution thereof is authorized by each of the aforesaid lessees, severally, to contract with the other allottees named in the allocation set forth therein for the furnishing of energy to such allottees at transmission voltage in accordance with the allocation to each allottee, and the Secretary is therein granted by each lessee, severally, the power in accordance with the provisions thereof to enforce as against each lessee the rights to be acquired by such other allottees by contracts to be entered into with the United States; and whereas in said lease the city has agreed to generate energy allocated to the municipality; and

(5) Whereas, the municipality is desirous of entering into a contract for the purchase of electrical energy to be generated at the power plant to be leased, as aforesaid, to the city;

(6) Now, therefore, in consideration of the mutual covenants herein contained, the parties hereto agree as follows, to wit:

ALLOCATION OF ELECTRICAL ENERGY

(7) The United States will cause electrical energy to be delivered to the municipality at Hoover Dam under and in pursuance of and subject to the provisions of the aforesaid lease, attached hereto as Exhibit A, for a period of fifty (50) years from the date at which energy is ready for delivery to the city, as announced by the Secretary, in accordance with the following allocation, to wit:

Of firm energy, as defined in article nine (9) hereof:

A. To the State of Nevada, for use in Nevada, not exceeding eighteen per centum (18%) of said total firm energy.

B. To the State of Arizona, for use in Arizona, not exceeding eighteen per centum (18%) of said total firm energy. Should either of the States not take its full eighteen per centum (18%) allocation within a period of twenty (20) years hereof, the other may then contract for the energy not so taken up to four per centum (4%) of the total firm energy; provided, that the combined amount used by the two States shall not, at any time, exceed thirty-six per centum (36%) of such total firm energy.

C. To the Metropolitan Water District of Southern California for pumping Colorado River water into and in its aqueduct for the use of such district within the following limits:

(1) Thirty-six per centum (36%) of said total firm energy, plus

(2) All secondary energy developed at the Hoover Dam power plant as provided in article fourteen (14) hereof; plus

(3) So much of the firm energy allocated to the States, the city, and the company as may not be in use by them. Energy allocated to the States, but not in use by them, shall be released to the district by the two lessees equally (unless they agree upon a different ratio) as follows:

(*a*) If the district makes a firm contract with the Secretary for the balance of the lease period for part or all of such unused States' energy (subject to the first right of the States thereto) such contract shall be made effective

upon two years' written notice to the Secretary, and compensation to the lessees, respectively, for main transmission line property rendered idle;

(*b*) If the district does not so make a firm contract for such energy, then energy allocated to the States but not in use by them, shall be released to the district upon not less than fifteen months' written notice to the Secretary and at such compensation as the district and such lessees, respectively, may agree upon, to cover cost and overhead of replacing energy which otherwise would have been received at the Pacific coast end of the main transmission lines by the lessees, respectively. Such cost shall include interest on and depreciation and operation and maintenance of the plant capacity while required for the generation of such substitute energy; and also appropriate allowance for interest on and maintenance and depreciation of plant capacity rendered idle because of cessation of generation of such substitute energy until such time as such plant capacity would otherwise have been installed by the lessees, respectively, for their own requirements. If the district and the respective lessees fail to agree on such compensation, such energy shall nevertheless be released to the district, and the disagreement shall be determined in accordance with article twenty-two (22) (*a*) hereof. Such determination shall include allowance for items of cost and overhead as specified in this paragraph. Pending such determination, energy so released shall be paid for by the district at the rate for firm energy but the determination of compensation under article twenty-two (22) (*a*) hereof shall not be controlled by such rate.

During any year beginning June 1, the district shall not use any secondary energy or any unused State energy, until it has first used subsequent to June 1, next preceding, an amount of firm energy equivalent to one-twelfth of the amount of firm energy it is obligated to take and/or pay for annually multiplied by the number of months elapsed since June 1 next preceding.

(4) If, due to temporary deficiency in secondary energy regularly used by the district, substitute energy is requested by the district in excess of the energy made available under the foregoing subparagraph (3) (*b*) the city and/or the company may release so much energy as may be practicable on the same terms as provided in subsection (3) (*b*) preceding.

D. To the municipalities of Anaheim, Beverly Hills, Burbank, Colton, Fullerton, Glendale, Newport Beach, Pasadena, Riverside, San Bernardino, and Santa Ana (referred to herein as "the municipalities"), six per centum (6%) in all, whereof 26.972 per centum (26.972%) of said six per centum (6%), being 1.6183 per centum (1.6183%) of all firm energy, shall be taken and/or paid for by the City of Pasadena.

E. To the City of Los Angeles, thirteen per centum (13%).

F. To Southern California Edison Co. (Ltd.), the Southern Sierras Power Co., the San Diego Consolidated Gas & Electric Co., and the

Los Angeles Gas & Electric Corporation, referred to herein as the companies, nine per centum (9%) in all, division whereof between the companies shall be made according to mutual agreement among them, if possible. If no such agreement is submitted to the Secretary on or before November 16, 1931, the Secretary shall determine the allocation of each.

It is further agreed that—

(I) So much of the energy allocated to the States (thirty-six per centum (36%) of the firm energy) and not in use by them, or failing their use, by the district for the above purposes, shall be taken and paid for one-half by the city and one-half by the company. In addition, all firm energy allocated to the city, thirteen per centum (13%), shall be taken and paid for by the city.

(II) All of the energy allocated to the municipalities may be contracted for in compliance with regulations of the Secretary, by any one or more of them, on or before November 16, 1931. So much of the energy allocated to the municipalities as is not so contracted for, or if contracted for, not used by them directly or under contract for municipal purposes and/or distribution to their inhabitants, shall be taken and paid for by the city.

(III) So much of the energy allocated to the Southern Sierras Power Co., the San Diego Consolidated Gas & Electric Co., and the Los Angeles Gas & Electric Corporation as is not firmly contracted for by them, severally, in compliance with regulations of the Secretary on or before November 16, 1931, shall be taken and paid for by the company.

(IV) If any allottee is permitted by the United States to divert water from the reservoir, at a time when the reservoir is not spilling, in consequence of which the amount of energy which would have been utilized is diminished, such diminution shall be debited to the allocation of firm energy herein made to such allottee; and charge for the energy equivalent of such diversion shall be made, and the amount of energy which the allottee shall otherwise be obligated to take and pay for hereunder shall be correspondingly reduced.

The reservoir shall be considered as spilling whenever water is being discharged in excess of the amount used for the generation of power, whether such waste occurs over the spillway or otherwise.

(V) Each of the States of Arizona and Nevada may, from time to time within the period of the aforesaid lease, contract for energy for use within such State in any amount until the total allocated, respectively, to each is in use as provided above; and may terminate such contract, or contracts, without prejudice to the right to again contract for such energy. All such contracts shall be executed with the Secretary. A contract requiring one thousand (1,000) horsepower (of maximum demand) or less may become effective or be terminated on six months' written notice of requirement or termination given the director by the State; provided, that the notice given shall be two years if in the twelve months preceding said notice of demand the total increment to such State has exceeded five thousand (5,000) horsepower of maximum demand or if in the twelve months preceding said notice of termination the decrement to such State has exceeded five thousand (5,000) horsepower of maximum demand. In all cases the director shall immediately transmit such notice to each lessee. Whenever the amount in use is in excess of five thousand (5,000)

horsepower of maximum demand, the lessees, respectively, shall be compensated for property rendered idle by use of such excess in such amount as the Secretary shall determine to be equitable. Firm energy not contracted for by the States shall be available for use by the District as herein elsewhere provided, and if not in use by the States and/or the District, shall be taken and paid for equally by the two lessees. No right which may be available to a State under section five (5) (*c*) of the Boulder Canyon project act to execute a firm contract for electrical energy for use within the State shall be impaired by any provision of this contract.

Of secondary energy.

It is further agreed that the district shall have the right to purchase and use all secondary energy as provided in article nine (9) and article fourteen (14) hereof for the purposes stated in the first paragraph of subdivision (C) of this article. The city and the company shall each have the right to purchase and use one-half of all secondary energy not used by the district. Any such energy not used by one lessee shall be available, for the time being, to the other. If secondary energy is not taken by the district, the city, and/or the company then and in such event, the United States reserves the right to take, use, and dispose of such energy, from time to time, as it sees fit, giving credit therefor as provided in article twelve (12) of Exhibit A hereof.

Of firm energy allocated to but not used by the district.

It is further agreed that in the event the district shall fail for any reason to use all or any of the firm energy herein allotted to it for the only purpose for which said firm energy is allotted to it, that is, for pumping water into and in its aqueduct, then the Secretary shall dispose of such unused energy until required by the district for said purpose, crediting on the district's obligation the proceeds of such disposition as received; provided, however, that no disposition of such firm energy shall be made by the Secretary without first giving to a successor to the district which may undertake to build or maintain a Colorado River aqueduct the opportunity to take said firm energy for the same purpose and under the same terms as those to which the district was obligated; and provided further, that in the event no such successor takes said firm energy as provided above, then no disposition of such firm energy shall be made by the Secretary without first giving to each lessee the opportunity to contract on equal terms and conditions, to be prescribed by the Secretary, for one-half of such energy, together with such portion of the remainder as the other lessee shall not elect to take.

Of firm energy not hereinbefore disposed of.

It is further agreed that the United States reserves the right, in case the dam which it erects provides a maximum water surface elevation in excess of one thousand two hundred twenty-two (1,222) feet above sea level (United States Geological Survey datum), and thereby increases the quantity of firm energy above the quantity of four billion two hundred forty million (4,240,000,000) kilowatt-hours allocated above, to dispose of such increase, but not to exceed ninety million (90,000,000) kilowatt-hours per year (June 1 to May 31, inclusive), to any municipality or municipalities by firm contract executed with the Secretary on or before November 16, 1931. Such disposition shall

be without prejudice to any provision of this contract or of the allocation above referred to. So much of such additional energy as is not so contracted for shall be taken and paid for by the city. Generation of such additional energy shall in any event be effected by the city.

USE OF ENERGY

(8) It is agreed that the energy contracted for by the municipality shall be used by it (directly or under contract) for municipal purposes and/or distribution to its inhabitants, and that so much of the energy contracted for by it as is not so used may be temporarily delivered by the United States to the City of Los Angeles, crediting on the municipality's obligation the proceeds of such disposition as received; but nothing herein contained shall relieve the municipality from paying for all firm energy contracted for by it whether said energy is taken by the municipality or not.

FIRM AND SECONDARY ENERGY DEFINED

(9) The amount of firm energy for the first year of operation (June 1 to May 31, inclusive) following the date of the completion of the dam as announced by the Secretary shall be defined as being four billion two hundred forty million (4,240,000,000) kilowatt-hours at transmission voltage. For every subsequent year the amount defined as firm energy shall be decreased by eight million seven hundred sixty thousand (8,760,000) kilowatt-hours from that of the previous year.

Nevertheless, if it be determined by the Secretary that the rate of decrease of kilowatt-hours per year, as above stated, is not in accord with actual conditions, the Secretary reserves the right to fix a lesser rate for any year (June 1 to May 31, inclusive) in advance.

If, by reason of international obligations arising through treaty or otherwise subsequent to the effective date of this contract, or by reason of interference with the program of construction and/or operation of the dam as provided for and contemplated by this contract, or by reason of other contingencies not now foreseen, the amount of firm energy available through the release of water from the Boulder Canyon Reservoir shall in fact be less than the amount of firm energy as above defined, then in any such event the obligation of the municipality to take electrical energy shall be reduced in an amount corresponding to such change. If for any reason the United States shall be wholly unable to fulfill its obligations hereunder in respect of the delivery of water, then the municipality may terminate this contract.

If the dam erected by the United States provides a maximum water surface elevation in excess of 1,222 feet above sea level (United States Geological Survey datum), the United States reserves the right to dispose of additional firm energy thereby made available, not to exceed ninety million (90,000,000) kilowatt-hours per year, subject to pro rata of the eight million seven hundred sixty thousand (8,760,000) kilowatt-hours annual diminution above provided for.

The term "secondary energy" wherever used herein shall mean all electrical energy generated in one year (June 1 to May 31, inclusive), in excess of the amount of firm energy as hereinabove defined, available in such year.

GENERATING AGENCIES

(10) In accordance with designation heretofore made by the Secretary, generation of energy allocated to the municipality shall be effected by the city, as agreed in Exhibit A annexed.

Disputes and disagreements between the municipality and the city generating energy for it, with respect to such generation and/or the cost thereof shall be determined by the Secretary.

DELIVERY OF ELECTRICAL ENERGY

(11) (*a*) Energy shall be ready for delivery to the city and to the municipalities including those contracting under the last paragraph of article seven (7) hereof when the Secretary announces that one billion two hundred fifty million (1,250,000,000) kilowatt-hours of energy per year is ready for delivery.

(*b*) Energy shall be ready for delivery to the district when the Secretary announces that two billion (2,000,000,000) kilowatt-hours of energy per year is available, which date, however, shall not be sooner than one (1) year after energy is ready for delivery to the city, provided, however, that the time when energy is ready for delivery to the district may be advanced subject to the approval of the Secretary, should the district so request, and that in such case the city shall be compensated by the district for interest and depreciation on and maintenance and operation of its main transmission line in case the total energy available to the city is reduced below one billion two hundred fifty million (1,250,000,000) kilowatt-hours per annum, in the proportion that such kilowatt-hours available to the city is less than one billion two hundred fifty million (1,250,000,000).

(*c*) Energy shall be ready for delivery to the company when the Secretary announces that water capable of generating four billion two hundred forty million (4,240,000,000) kilowatt-hours of energy per year is available, which date, however, shall not be sooner than three (3) years after commencement of delivery of energy to the city and which shall not be until the water surface in Boulder Canyon Reservoir on August 1 immediately preceding has reached an elevation of eleven hundred fifty (1,150) feet above sea level (United States Geological Survey datum).

(*d*) Upon written notification from the Secretary that generation equipment is ready for operation by it and water is available for generating energy therefrom, each lessee will be required to assume the operation and maintenance of its respective portion of the power plant, and thereafter the municipality shall not look to the United States for compensation for injury and/or damages of any kind which may in any manner arise out of the operation and maintenance of the portion of such plant leased to the city.

CHARGES TO BE PAID THE UNITED STATES

(12) In consideration of this contract, the municipality agrees (1) to pay the United States for the use of falling water for generation of energy for the municipality as follows:

(*a*) One and sixty-three hundredths mills ($0.00163) per kilowatt-hour (delivered at transmission voltage) for all firm energy contracted for by it;

(2) To pay the United States for credit to the city on account of use of the leased equipment as herein elsewhere provided; and

(3) To pay the United States for credit to the city on account of maintenance of said equipment in first-class operating condition, including repairs to and replacements of machinery; provided, however, that, if the expenditures for replacements shall exceed at any time the sum accumulated by the city as a depreciation reserve in accordance with rules and regulations prescribed by the Secretary, pursuant to the Boulder Canyon project act, less all amounts previously withdrawn for replacements, then the rates aforesaid shall be readjusted as hereinafter provided so as to reimburse the city for such excess expenditures within the term of this contract.

At the end of fifteen (15) years from the date of execution of said Exhibit A (April 26, 1930), and every ten (10) years thereafter, the above rates of payment for energy shall be readjusted upon demand of either party hereto, either upward or downward as to price, as the Secretary may find to be justified by competitive conditions at distributing points or competitive centers.

The rate for falling water for generation of firm energy which shall be uniform for both lessees and the municipality provided for by any such readjustment shall be arrived at by deducting from the price of electrical energy justified by competitive conditions at distributing points or competitive centers—(1) all fixed and operating costs of transmission to such points; (2) all fixed and operating costs of such portion of the power-plant machinery as is to be operated and maintained by the several lessees, including the cost of repairs and replacements, together with such readjustment as to replacements as is provided for in paragraph 3 in this article; it being understood that such readjusted rates shall under no circumstances exceed the value of said energy, based upon competitive conditions at distributing points or competitive centers.

The charges agreed to be paid by the municipality to the United States, for credit to the city as generating agency, in this article, shall be such proportion of the cost incurred by such generating agency as it and the city may agree, or, failing such agreement, as the Secretary may determine.

The term "cost," as used with reference to generating energy, shall include a proper proportionate allowance for amortization for the cost of machinery and equipment as provided in paragraph *a* of article 9 of Exhibit A hereof, and interest on the prepayments thereof made by the city, a proper proportionate part of any annuity set up in accordance with regulations of the Secretary provided for in subdivision 3 of article sixteen (16) of Exhibit A hereof, and any additional expenditures made by the city with the approval of the Secretary, for the purpose of meeting the obligation of the city to make replacements; and a proper proportionate part of the actual outlay of the city for operating such machinery and equipment and keeping the same in repair, including reasonable overhead charges. The extent of the allowance for the several items in the event of disagreement between the city and municipality, and the system of accounting therefor, shall be prescribed by the Secretary under uniform regulations as required by section 6 of the Boulder Canyon project act.

MONTHLY PAYMENTS AND PENALTIES

(13) The municipality shall pay monthly for energy in accordance with the rates established or provided for herein and for the generation thereof as provided in article twelve (12).

When energy taken in any month is not in excess of one-twelfth (1/12) of the minimum annual obligation, bill for such month shall be computed at the rate for firm energy in effect when such energy was taken on the basis of the actual amount of energy used during such month; provided, however, that the bill for the month of May shall not be less than the difference between the minimum annual payment, as provided in article fourteen (14) hereof, and the sum of the amounts charged for firm energy during the preceding eleven months. The United States will submit bills to the municipality by the fifth of each month immediately following the month during which the energy is generated, and payments shall be due on the first day of the month immediately succeeding. If such charges are not paid when due, a penalty of one per centum (1%) of the amount unpaid shall be added thereto, and thereafter an additional penalty of one per centum (1%) of the amount unpaid shall be added on the first day of each calendar month thereafter during such delinquency.

The monthly charge for generation of such energy to be credited to the generating agency shall be in such amount as may be determined in accordance with article twelve (12) hereof.

MINIMUM ANNUAL PAYMENT

(14) The minimum quantity of firm energy which the municipality shall take and/or pay for each year (June 1 to May 31, inclusive), under the terms of this contract, and after the same is ready for delivery to the municipality, as provided in subdivision (*a*) of article eleven (11) hereof, shall be 1.6183 per centum of all firm energy as defined in article nine (9) hereof, available in said year. The total payments made by the municipality for firm energy available in any year (June 1 to May 31, inclusive), whether any energy is taken by it or not, exclusive of its payments for credit to the generating agency, shall be not less than the number of kilowatt-hours of firm energy which the municipality is obligated to take and/or pay for during said year, multiplied by one and sixty-three hundredths mills ($0.00163), or multiplied by the adjusted rate of payment for firm energy in case the said rate is adjusted as provided in article twelve (12) hereof. For a fractional year at the beginning or end of the contract period, the minimum annual payment for firm energy shall be proportionately adjusted in the ratio that the number of days water is available for generation of energy in such fractional year bears to three hundred sixty-five (365); provided, that the minimum annual payment shall be reduced in case of interruptions or curtailment of delivery of water as provided in article seventeen (17) hereof.

The minimum annual payments made by the municipality for generation of such energy, to be credited to the generating agency, shall be determined in accordance with article twelve (12) hereof.

NO ENERGY TO BE DELIVERED WITHOUT PAYMENT

(15) Unless the written consent of the Secretary be first obtained, no electrical energy shall be generated for, or delivered to, the municipality if it shall be in arrears for more than twelve (12) months in the payment of any charge and/or penalty due or to become due the United States hereunder, whether for its own use or for credit to the generating agency.

CONTRACT MAY BE TERMINATED IN CASE OF BREACH

(16) If the municipality shall be in arrears for more than twelve (12) months in the payment of any charge and/or penalty due or to become due to the United States hereunder, and shall not have obtained an extension of time for payment thereof, or, if such extension be obtained, has not made such payment within the time as extended, then the Secretary reserves the right forthwith upon written notice to the municipality to terminate this contract and dispose of the energy herein allocated as he may see fit; provided, he shall first give opportunity to the city to contract on terms and conditions to be prescribed by the Secretary, for such energy; and provided further, that such disposition shall be subject to the condition that the municipality shall have the right at any time within ten (10) years from date of the first of the defaults or breaches for which the contract is terminated, to become reinstated hereunder by payment to the United States of all arrearages and penalties, if any, together with any and all loss incurred by the United States by reason of such termination, and compensation to the contractor or contractors for equipment rendered idle by such reinstatement. In case of disagreement or dispute as to any of the items so to be paid the same shall be determined as provided in article 22 hereof. Nothing contained in this contract shall relieve the municipality from the obligation to make the United States whole, for the period of this contract, for all loss and/or damage occasioned by the failure of the municipality to take and/or pay for energy as provided in this contract. The waiver of a breach of any of the provisions of this contract shall not be deemed to be a waiver of any other provisions hereof, or of a subsequent breach of such provision.

INTERRUPTIONS IN DELIVERY OF WATER

(17) The United States will deliver water continuously to each lessee in the quantity, in the manner, and at the times necessary for the generation of the energy which each of said lessees has the right and/or obligation to generate under this contract in accordance with the load requirements of each of said lessees, and of allottees for which the respective lessees are generating agencies, excepting only that such delivery shall be regulated so as not to interfere with the necessary use of said Hoover Dam and Boulder Canyon Reservoir for river regulation, improvement of navigation, flood control, irrigation, or domestic uses, and the satisfaction of present perfected rights in or to the waters of the Colorado River, or its tributaries, in pursuance of Article VIII of the Colorado River compact, and this contract is made upon the express condition, and with the express covenant, that the rights of the municipality to the waters of the Colorado

River, or its tributaries, are subject to and controlled by the Colorado River compact. The United States reserves the right temporarily to discontinue or reduce the delivery of water for the generation of energy at any time for the purpose of maintenance, repairs, and/or replacements, or installation of equipment, and for investigations and inspections necessary thereto; provided, however, that the United States shall except in case of emergency give to the lessees reasonable notice in advance of such temporary discontinuance or reduction, and that the United States shall make such inspections and perform such maintenance and repair work after consultation with the lessees at such times and in such manner as will cause the least inconvenience to the lessees, and shall prosecute such work with diligence, and, without unnecessary delay, will resume delivery of water so discontinued or reduced. Should the delivery of water be discontinued or reduced below the amount required for the normal generation of firm energy for the payment of which said municipality has hereby obligated itself, the total number of hours of such discontinuance or reduction in any year shall be determined by taking the sum of the number of hours during which the delivery of water is totally discontinued, and the product of the number of hours during which the delivery of water is partially reduced and the percentage of said partial reduction below the actual quantity of water required by the lessees, severally, for the normal generation of firm energy. Total or partial reductions in delivery of water which do not reduce the power output below the amount required at the time by such lessee for the normal generation of firm energy, will not be considered in determining the total hours of discontinuance in any year. The minimum annual payment specified in article fourteen (14) hereof shall be reduced by the ratio that the total number of hours of such discontinuance bears to eight thousand seven hundred sixty (8,760). In no event shall any liability accrue against the United States, its officers, agents, and/or employees, for any damage, direct or indirect, arising on account of drought, hostile diversion, act of God, or of the public enemy, or other similar cause; nevertheless interruptions in delivery of water occasioned by such causes shall be governed as hereinabove provided in this article.

MEASUREMENT OF ENERGY

(18) All energy shall be measured at generator voltage and suitable metering equipment shall be provided and installed by the United States for this purpose. Suitable correction shall be made in the amounts of energy as measured at generator voltage to cover step-up transformer losses and energy required for operation of station auxiliaries in determining the amounts of energy delivered at transmission voltage as provided in this contract. The said meter equipment shall be maintained by and at the expense of the respective lessees. Meters shall be tested at any reasonable time upon the request of either the United States or a lessee, and in any event they shall be tested at least once each year. If the test discloses that the error of any meter exceeds one per centum (1%), such meter shall be adjusted so that the error does not exceed one-half of one per centum (½%). Meter equipment shall be tested by means of suitable testing equipment which will be provided by the United States, and which shall be calibrated by the United States Bureau of Standards as often as

requested by any party hereto. Meters shall be kept sealed, and the seals shall be broken only in the presence of representatives of both the United States and the lessees respectively and likewise all test of meter equipment shall be conducted only when representatives of both the United States and the respective lessees are present. In the event that energy furnished to the municipality at Boulder Canyon is transmitted over lines of another contractor, the meters at Boulder Canyon will record only the total amounts of energy delivered to the operators of main transmission lines and it will not be possible to determine from these meters the division of the energy between the various municipalities and the operator. The municipality or the operator of said lines shall provide suitable meter equipment, satisfactory to the Secretary, at the point where the energy is delivered by the operator of said lines to the municipality, for determining the amounts of energy delivered to the municipality at said point and to these amounts there shall be added proper corrections to cover transformer and line losses in determining the amounts of energy furnished to the municipality at Boulder Canyon. The Secretary's determination of said amounts shall be conclusive.

INSPECTION BY THE UNITED STATES

(19) The Secretary or his representatives shall have free access at all reasonable times to the books and records of the municipality relating to the disposal of electrical energy, with the right at any time during office hours to make copies of or from the same.

TRANSMISSION

(20) The city having in article twenty-five (25) of Exhibit A hereof undertaken that it shall construct, operate, and maintain at cost, including allowance for necessary overhead expense, the main transmission lines required for transmitting all Boulder Canyon energy allocated to the municipality to the receiving station at the Pacific coast end of the city's main transmission lines, the municipality agrees to pay its pro rata of the cost of construction, operation, and maintenance of said lines as it and the city may agree, and the Secretary will, when notified by the city that arrangements to that effect have been concluded by the city and municipality, cause delivery of energy at transmission voltage to be made accordingly. In the event that an operator of main transmission lines other than the city transmits the energy allocated to the municipality pursuant to Exhibit A, article 25 (*b*), the obligation of the municipality under this paragraph shall apply for the benefit of such other operator as though it has been named herein instead of the city. In any event, disputes and disagreements between the municipality and the operator of main transmission lines shall be determined in accordance with article 22 (*a*) hereof. Nothing herein contained, however, shall relieve the municipality of the obligation to pay the United States for energy contracted for by it, whether transmitted or not.

DURATION OF CONTRACT

(21) This contract shall not become effective for any purpose unless on or before November 16, 1931, two-thirds of the qualified electors of the municipality voting at an election to be held for that

purpose have assented that the municipality shall incur the indebtedness and liability of this contract, and make provision for the collection of an annual tax sufficient to pay to the United States each year the minimum annual obligation of the municipality under this contract, or any portion thereof not paid from other sources. After having become effective this contract shall remain in effect until the expiration of a period of fifty (50) years from the date at which energy is ready for delivery to the city, as announced by the Secretary. The holder of any contract for electrical energy, including the municipality, not in default thereunder, shall be entitled to a renewal thereof upon such terms and conditions as may be authorized or required under the then existing laws and regulations, unless the property of such holder dependent for its usefulness on a continuation of the contract be purchased or acquired and such contractor be compensated for damages to its property, used and useful in the transmission and distribution of such electrical energy and not taken, resulting from the termination of the supply.

DISPUTES AND DISAGREEMENTS

(22) (*a*) Disputes or disagreements arising under this contract between the municipality and any lessee or other allottee shall be arbitrated by three arbitrators, except where otherwise provided in this contract. The municipality shall name one arbitrator, and the other disputant shall name one. These two shall name the third. If either disputant has notified the other that arbitration is demanded and that it has named an arbitrator, and if thereafter the other disputant fails to name an arbitrator for fifteen days, the Secretary, if requested by either disputant, shall name such arbitrator, who shall proceed as though named by the disputant. The two arbitrators so named shall meet within five days after appointment of the second and name the third. If they fail to do so, the Secretary will, on request by either disputant or arbitrator, name the third. A decision by any two of the three arbitrators shall be binding on the disputants and enforceable by court proceedings or by the Secretary in his discretion. Arbitration as herein provided, or the failure of the arbitrators to render a decision within six months of appointment of the third arbitrator, shall be a condition precedent to suit by either disputant against the other upon the matter in dispute.

(*b*) Disputes or disagreements between the United States and the municipality as to the interpretation or performance of the provisions of this contract shall be determined either by arbitration or court proceedings, the Secretary of the Interior being authorized to act for the United States in such proceedings. Whenever a controversy arises out of this contract, and the disputants agree to submit the matter to arbitration, the municipality shall name one arbitrator and the Secretary shall name one arbitrator and the two arbitrators thus chosen shall elect three other arbitrators, but in the event of their failure to name all or any of the three arbitrators within five (5) days after their first meeting, such arbitrators not so elected shall be named by the senior judge of the United States Circuit Court of Appeals for the ninth circuit. The decision of any three of such arbitrators shall be a valid and binding award of the arbitrators.

USE OF PUBLIC AND RESERVED LANDS OF THE UNITED STATES

(23) The use is authorized of such public and reserved lands of the United States as may be necessary or convenient for the construction, operation, and maintenance of main transmission lines, to transmit electrical energy generated at Hoover Dam, together with the use of such public and reserved lands of the United States, as may be designated by the Secretary from time to time for camp sites, residences for employees, warehouses, and other uses incident to the operation and maintenance of the power plant and incidental works.

PRIORITY OF CLAIMS OF THE UNITED STATES

(24) Claims of the United States arising out of this contract shall have priority over all others, secured or unsecured, and the municipality shall exercise all its powers including the power of taxation, and the powers of assessment, levying and collection of taxes of every kind which the municipality has or may acquire for the provision of funds which may become due to the United States under this contract.

TRANSFER OF INTEREST IN CONTRACT

(25) No voluntary transfer of this contract, or of the rights hereunder, shall be made without the written approval of the Secretary; and any successor or assign of the rights of the municipality, whether by voluntary transfer, judicial sale, foreclosure sale, or otherwise, shall be subject to all the conditions of the Boulder Canyon project act and also subject to all the provisions and conditions of this contract to the same extent as though such successor or assign were the original contractor hereunder; provided, that a mortgage or trust deed or judicial sales made thereunder shall not be deemed voluntary transfers within the meaning of this article.

RULES AND REGULATIONS

(26) This contract is subject to such rules and regulations conforming to the Boulder Canyon project act as the Secretary may from time to time promulgate; provided, however, that no right of the municipality hereunder shall be impaired or obligation of the municipality hereunder, shall be extended thereby; and provided further, that opportunity for hearing shall be afforded the municipality by the Secretary prior to promulgation thereof.

AGREEMENT SUBJECT TO COLORADO RIVER COMPACT

(27) This contract is made upon the express condition and with the express understanding that all rights hereunder shall be subject to and controlled by the Colorado River compact, being the compact or agreement signed at Santa Fe, N. Mex., November 24, 1922, pursuant to act of Congress approved August 19, 1921, entitled "An act to permit a compact or agreement between the States of Arizona, California, Colorado, Nevada, New Mexico, Utah, and Wyoming, respecting the disposition and apportionment of the waters of the Colorado River, and for other purposes," which compact was approved in section 13 (*a*) of the Boulder Canyon project act.

CONTINGENT UPON APPROPRIATIONS

(28) This contract is subject to appropriations being made by Congress from year to year of moneys sufficient to do the work provided for herein, and to there being sufficient moneys available in the Colorado River Dam fund to permit allotments to be made for the performance of such work. No liability shall accrue against the United States, its officers, agents, or employees, by reason of sufficient moneys not being so appropriated or on account of there not being sufficient moneys in the Colorado River Dam fund to permit of said allotments. This agreement is also subject to the condition that if for any other reason construction of Hoover Dam is not prosecuted to completion with reasonable diligence, then and in such event either party hereto may terminate its obligations hereunder upon one (1) year's written notice to the other party hereto.

TITLE TO REMAIN IN UNITED STATES

(29) As provided by section six (6) of the Boulder Canyon project act, the title to Hoover Dam, reservoir, plant, and incidental works shall forever remain in the United States.

REMEDIES UNDER CONTRACT NOT EXCLUSIVE

(30) Nothing contained in this contract shall be construed as in any manner abridging, limiting, or depriving the United States of any means of enforcing any remedy either at law or in equity for the breach of any of the provisions hereof which it would otherwise have.

MEMBER OF CONGRESS CLAUSE

(31) No Member of or Delegate to Congress or Resident Commissioner shall be admitted to any share or part of this contract or to any benefit that may arise therefrom. Nothing, however, herein contained shall be construed to extend to this contract if made with a corporation for its general benefit.

In witness whereof, the parties hereto have caused this contract to be executed the day and year first above written.

Attest:

THE UNITED STATES OF AMERICA,
By RAY LYMAN WILBUR,
Secretary of the Interior.

THE CITY OF PASADENA,
By P. M. WALKER,
Chairman, Board of Directors.

Approved as to form:
By HAROLD P. HULS,
City Attorney.

Attest:
BESSIE CHAMBERLAIN,
City Clerk of the City of Pasadena.

EXHIBIT A

Omitted. Consists of Appendix 2, supra.

[APPENDIX 7]

BOULDER CANYON PROJECT

CONTRACT FOR ELECTRICAL ENERGY

THE UNITED STATES
AND
THE CITY OF GLENDALE
November 12, 1931

CONTRACT FOR ELECTRICAL ENERGY

Article

CONTRACT FOR ELECTRICAL ENERGY

(1) This contract, made this 12th day of November, nineteen hundred thirty-one, pursuant to the act of Congress approved June 17, 1902 (32 Stat. 388), and acts amendatory thereof or supplementary thereto, all of which acts are commonly known and referred to as the reclamation law, and particularly pursuant to the act of Congress approved December 21, 1928 (45 Stat. 1057), designated the Boulder Canyon project act, between the United States of America, hereinafter referred to as the United States, acting for this purpose by Ray Lyman Wilbur, Secretary of the Interior, hereinafter styled the Secretary, and the City of Glendale, a municipal corporation, organized and existing under and by virtue of the laws of the State of California, hereinafter styled the municipality.

Witnesseth:

EXPLANATORY RECITALS

(2) Whereas, for the purpose of controlling the floods, improving navigation, and regulating the flow of the Colorado River, providing for storage and for the delivery of the stored waters for reclamation of public lands and other beneficial uses exclusively within the United States, and for the generation of electrical energy, the Secretary, subject to the terms of the Colorado River compact, is authorized to construct, operate, and maintain a dam and incidental works in the main stream of the Colorado River at Black Canyon or Boulder Canyon, adequate to create a storage reservoir of a capacity of not less than twenty million acre-feet of water; also to construct, equip, operate, and maintain at or near said dam, or cause to be constructed, a complete plant and incidental structures suitable for the fullest economic development of electrical energy from the water discharged from said reservoir; and

(3) Whereas, after full consideration of the advantages of both the Black Canyon and Boulder Canyon dam sites, the Secretary has determined upon Black Canyon as the site of the aforesaid dam, hereinafter styled the Hoover Dam, and has determined that the revenues provided for by this contract, together with other contracts in accordance with the provisions of the Boulder Canyon project act, are adequate in his judgment to insure payment of all expenses of operation and maintenance of the Hoover Dam and appurtenant works incurred by the United States, and the repayment within fifty (50) years from the date of completion of said works of all amounts advanced to the Colorado River Dam fund under subdivision (*b*) of section 2 of the Boulder Canyon project act, together with interest thereon made reimbursable under said act; and

(4) Whereas, the United States has entered into an agreement of date April 26, 1930, with the City of Los Angles (hereinafter styled the city), and Southern California Edison Co. (Ltd.) (hereinafter styled the company), severally (both hereinafter referred to as the lessees) for the lease, and the operation and maintenance of a Government-built power plant to be constructed at Hoover Dam, together with the right to generate electrical energy (a copy of which said lease

as amended by supplemental agreements of date May 28, 1930, and September 23, 1931, is attached hereto marked Exhibit A, and by this reference made a part hereof); and whereas in said lease the Secretary has reserved the authority to, and in consideration of the execution thereof is authorized by each of the aforesaid lessees, severally, to contract with the other allottees named in the allocation set forth therein for the furnishing of energy to such allottees at transmission voltage in accordance with the allocation to each allottee, and the Secretary is therein granted by each lessee, severally, the power in accordance with the provisions thereof to enforce as against each lessee the rights to be acquired by such other allottees by contracts to be entered into with the United States; and whereas in said lease the city has agreed to generate energy allocated to the municplaity; and

(5) Whereas, the municipality is desirous of entering into a contract for the purchase of electrical energy to be generated at the power plant to be leased, as aforesaid, to the city;

(6) Now, therefore, in consideration of the mutual covenants herein contained, the parties hereto agree as follows, to wit:

ALLOCATION OF ELECTRICAL ENERGY

(7) The United States will cause electrical energy to be delivered to the municipality at Hoover Dam under and in pursuance of and subject to the provisions of the aforesaid proposed lease, attached hereto as Exhibit A, for a period of fifty (50) years from the date at which energy is ready for delivery to the city, as announced by the Secretary, in accordance with the following allocation, to wit:

Of firm energy, as defined in article nine (9) hereof:

A. To the State of Nevada, for use in Nevada, not exceeding eighteen per centum (18%) of said total firm energy.

B. To the State of Arizona, for use in Arizona, not exceeding eighteen per centum (18%) of said total firm energy. Should either of the States not take its full eighteen per centum (18%) allocation within a period of twenty (20) years hereof, the other may then contract for the energy not so taken up to four per centum (4%) of the total firm energy, provided that the combined amount used by the two States shall not, at any time, exceed thirty-six per centum (36%) of such total firm energy.

C. To the Metropolitan Water District of Southern California for pumping Colorado River water into and in its aqueduct for the use of such district within the following limits:

(1) Thirty-six per centum (36%) of said total firm energy, plus

(2) All secondary energy developed at the Hoover Dam power plant as provided in article fourteen (14) hereof; plus

(3) So much of the firm energy allocated to the States, the city, and the company as may not be in use by them. Energy allocated to the States, but not in use by them, shall be released to the district by the two lessees equally (unless they agree upon a different ratio) as follows:

(*a*) If the district makes a firm contract with the Secretary for the balance of the lease period for part or all of such unused States' energy (subject to the first right of the States thereto), such contract shall be made effective upon two years' written notice to the Secretary, and

compensation to the lessees, respectively, for main transmission-line property rendered idle;

(*b*) If the district does not so make a firm contract for such energy, then energy allocated to the States, but not in use by them, shall be released to the district upon not less than fifteen months' written notice to the Secretary and at such compensation as the district and such lessees, respectively, may agree upon to cover cost and overhead of replacing energy which otherwise would have been received at the Pacific coast end of the main transmission lines by the lessees, respectively. Such cost shall include interest on and depreciation and operation and maintenance of the plant capacity while required for the generation of such substitute energy; and also appropriate allowance for interest on and maintenance and depreciation of plant capacity rendered idle because of cessation of generation of such substitute energy until such time as such plant capacity would otherwise have been installed by the lessees, respectively, for their own requirements. If the district and the respective lessees fail to agree on such compensation, such energy shall nevertheless be released to the district, and the disagreement shall be determined in accordance with article twenty-two (22) (*a*) hereof. Such determination shall include allowance for items of cost and overhead as specified in this paragraph. Pending such determination, energy so released shall be paid for by the district at the rate for firm energy, but the determination of compensation under article twenty-two (22) (*a*) hereof shall not be controlled by such rate.

During any year beginning June 1, the district shall not use any secondary energy or any unused State energy until it has first used subsequent to June 1 next preceding an amount of firm energy equivalent to one-twelfth of the amount of firm energy it is obligated to take and/or pay for annually multiplied by the number of months elapsed since June 1 next preceding.

(4) If, due to temporary deficiency in secondary energy regularly used by the district, substitute energy is requested by the district in excess of the energy made available under the foregoing subparagraph (3) (*b*) the city and/or the company may release so much energy as may be practicable on the same terms as provided in subsection (3) (*b*) preceding.

D. To the municipalities of Anaheim, Beverly Hills, Burbank, Colton, Fullerton, Glendale, Newport Beach, Pasadena, Riverside, San Bernardino, and Santa Ana (referred to herein as "the municipalities") six per centum (6%) in all, whereof 31.445 per centum (31.445%) of said six per centum (6%), being 1.8867 per centum (1.8867%) of all firm energy, shall be taken and/or paid for by the city of Glendale.

E. To the City of Los Angeles, thirteen per centum (13%).

F. To Southern California Edison Co. (Ltd.), the Southern Sierras Power Co., the San Diego Consolidated Gas & Electric Co., and the Los Angeles Gas & Electric Corporation, referred to herein as the

companies, nine per centum (9%) in all, division whereof between the companies shall be made according to mutual agreement among them, if possible. If no such agreement is submitted to the Secretary on or before November 16, 1931, the Secretary shall determine the allocation of each.

It is further agreed that—

(I) So much of the energy allocated to the States (thirty-six per centum (36%) of the firm energy) and not in use by them, or failing their use, by the district for the above purposes, shall be taken, and paid for by the city and one-half by the company. In addition, all firm energy allocated to the city (thirteen per centum (13%)) shall be taken and paid for by the city.

(II) All of the energy allocated to the municipalities may be contracted for in compliance with regulations of the Secretary, by any one or more of them, on or before November 16, 1931. So much of the energy allocated to the municipalities as is not so contracted for, or, if contracted for, not used by them directly or under contract for municipal purposes and/or distribution to their inhabitants, shall be taken and paid for by the city.

(III) So much of the energy allocated to the Southern Sierras Power Co., the San Diego Consolidated Gas & Electric Co., and the Los Angeles Gas & Electric Corporation as is not firmly contracted for by them, severally, in compliance with regulations of the Secretary, on or before November 16, 1931, shall be taken and paid for by the company.

(IV) If any allottee is permitted by the United States to divert water from the reservoir at a time when the reservoir is not spilling, in consequence of which the amount of energy which would have been utilized is diminished, such diminution shall be debited to the allocation of firm energy herein made to such allottee; and charge for the energy equivalent of such diversion shall be made, and the amount of energy which the allottee shall otherwise be obligated to take and pay for hereunder shall be correspondingly reduced.

The reservoir shall be considered as spilling whenever water is being discharged in excess of the amount used for the generation of power, whether such waste occurs over the spillway or otherwise.

(V) Each of the States of Arizona and Nevada may, from time to time within the period of the aforesaid lease, contract for energy for use within such State in any amount until the total allocated, respectively, to each is in use as provided above; and may terminate such contract, or contracts, without prejudice to the right to again contract for such energy. All such contracts shall be executed with the Secretary. A contract requiring one thousand (1,000) horsepower (of maximum demand) or less may become effective or be terminated on six months' written notice of requirement or termination given the director by the State; provided, that the notice given shall be two years if in the twelve months preceding said notice of demand the total increment to such State has exceeded five thousand (5,000) horsepower of maximum demand or if in the twelve months preceding said notice of termination the decrement to such State has exceeded five thousand (5,000) horsepower of maximum demand. In all cases the director shall immediately transmit such notice to each lessee. Whenever the amount in use is in excess of five thousand (5,000) horsepower of maximum demand, the lessees, respectively,

shall be compensated for property rendered idle by use of such excess in such amount as the Secretary shall determine to be equitable. Firm energy not contracted for by the States shall be available for use by the district as herein elsewhere provided, and if not in use by the States and/or the district, shall be taken and paid for equally by the two lessees. No right which may be available to a State under section five (5) (*c*) of the Boulder Canyon project act to execute a firm contract for electrical energy for use within the State shall be impaired by any provision of this contract.

Of secondary energy.

It is further agreed that the district shall have the right to purchase and use all secondary energy as provided in article nine (9) and article fourteen (14) hereof for the purposes stated in the first paragraph of subdivision (C) of this article. The city and the company shall each have the right to purchase and use one-half of all secondary energy not used by the district. Any such energy not used by one lessee shall be available, for the time being, to the other. If secondary energy is not taken by the district, the city, and/or the company then and in such event, the United States reserves the right to take, use, and dispose of such energy, from time to time, as it sees fit, giving credit therefor as provided in article twelve (12) of Exhibit A hereof

Of firm energy allocated to but not used by the district.

It is further agreed that in the event the district shall fail for any reason to use all or any of the firm energy herein allotted to it for the only purpose for which said firm energy is allotted to it, that is, for pumping water into and in its aqueduct, then the Secretary shall dispose of such unused energy until required by the district for said purpose, crediting on the district's obligation the proceeds of such disposition as received; provided, however, that no disposition of such firm energy shall be made by the Secretary without first giving to a successor to the district which may undertake to build or maintain a Colorado River aqueduct the opportunity to take said firm energy for the same purpose and under the same terms as those to which the district was obligated; and provided further, that in the event no such successor takes said firm energy as provided above, then no disposition of such firm energy shall be made by the Secretary without first giving to each lessee the opportunity to contract on equal terms and conditions, to be prescribed by the Secretary, for one-half of such energy, together with such portion of the remainder as the other lessee shall not elect to take.

Of firm energy not hereinbefore disposed of.

It is further agreed that the United States reserves the right, in case the dam which it erects provides a maximum water surface elevation in excess of one thousand two hundredtwenty-two (1,222) feet above sea level (United States Geological Survey datum), and thereby increases the quantity of firm energy above the quantity of four billion two hundred forty million (4,240,000,000) kilowatt-hours allocated above, to dispose of such increase, but not to exceed ninety million (90,000,000) kilowatt-hours per year (June 1 to May 31, inclusive), to any municipality or municipalities by firm contract executed with the Secretary on or before November 16, 1931. Such

disposition shall be without prejudice to any provision of this contract or of the allocation above referred to. So much of such additional energy as is not so contracted for shall be taken and paid for by the city. Generation of such additional energy shall in any event be effected by the city.

USE OF ENERGY

(8) It is agreed that the energy contracted for by the municipality shall be used by it (directly or under contract) for municipal purposes and/or distribution to its inhabitants, and that so much of the energy contracted for by it as is not so used may be temporarily delivered by the United States to the City of Los Angeles, crediting on the municipality's obligation the proceeds of such disposition as received; but nothing herein contained shall relieve the municipality from paying for all firm energy contracted for by it whether said energy is taken by the municipality or not.

FIRM AND SECONDARY ENERGY DEFINED

(9) The amount of firm energy for the first year of operation (June 1 to May 31, inclusive), following the date of the completion of the dam as announced by the Secretary shall be defined as being four billion two hundred forty million (4,240,000,000) kilowatt-hours at transmission voltage. For every subsequent year the amount defined as firm energy shall be decreased by eight million seven hundred sixty thousand (8,760,000) kilowatt-hours from that of the previous year.

Nevertheless, if it be determined by the Secretary that the rate of decrease of kilowatt-hours per year as above stated, is not in accord with actual conditions, the Secretary reserves the right to fix a lesser rate for any year (June 1 to May 31, inclusive), in advance.

If, by reason of international obligations arising through treaty or otherwise subsequent to the effective date of this contract, or by reason of interference with the program of construction and/or operation of the dam as provided for and contemplated by this contract, or by reason of other contingencies not now foreseen, the amount of firm energy available through the release of water from the Boulder Canyon Reservoir shall in fact be less than the amount of firm energy as above defined, then in any such event the obligation of the municipality to take electrical energy shall be reduced in an amount corresponding to such change. If for any reason the United States shall be wholly unable to fulfill its obligations hereunder in respect of the delivery of water, then the municipality may terminate this contract.

If the dam erected by the United States provides a maximum water surface elevation in excess of 1,222 feet above sea level (United States Geological Survey datum), the United States reserves the right to dispose of additional firm energy thereby made available, not to exceed ninety million (90,000,000) kilowatt-hours per year, subject to pro rata of the eight million seven hundred sixty thousand (8,760,000) kilowatt-hours annual diminution above provided for.

The term "secondary energy" wherever used herein shall mean all electrical energy generated in one year (June 1 to May 31, inclusive), in excess of the amount of firm energy as hereinabove defined, available in such year.

GENERATING AGENCIES

(10) In accordance with designation heretofore made by the Secretary, generation of energy allocated to the municipality shall be effected by the city as agreed in Exhibit A annexed.

Disputes and disagreements between the municipality and the city generating energy for it, with respect to such generation and/or the cost thereof, shall be determined by the Secretary.

DELIVERY OF ELECTRICAL ENERGY

(11) (*a*) Energy shall be ready for delivery to the city and to the municipalities including those contracting under the last paragraph of article seven (7) hereof when the Secretary announces that one billion two hundred fifty million (1,250,000,000) kilowatt-hours of energy per year is ready for delivery.

(*b*) Energy shall be ready for delivery to the district when the Secretary announces that two billion (2,000,000,000) kilowatt-hours of energy per year is available, which date, however, shall not be sooner than one (1) year after energy is ready for delivery to the city; provided, however, that the time when energy is ready for delivery to the district may be advanced subject to the approval of the Secretary, should the district so request, and that in such case the city shall be compensated by the district for interest and depreciation on and maintenance and operation of its main transmission line in case the total energy available to the city is reduced below one billion two hundred fifty million (1,250,000,000) kilowatt-hours per annum, in the proportion that such kilowatt-hours available to the city is less than one billion two hundred fifty million (1,250,000,000).

(*c*) Energy shall be ready for delivery to the company when the Secretary announces that water capable of generating four billion two hundred forty million (4,240,000,000) kilowatt-hours of energy per year is available, which date, however, shall not be sooner than three (3) years after commencement of delivery of energy to the city and which shall not be until the water surface in Boulder Canyon Reservoir on August 1 immediately preceding has reached an elevation of eleven hundred fifty (1,150) feet above sea level (United States Geological Survey datum).

(*d*) Upon written notification from the Secretary that generation equipment is ready for operation by it and water is available for generating energy therefrom, each lessee will be required to assume the operation and maintenance of its respective portion of the power plant, and thereafter the municipality shall not look to the United States for compensation for injury and/or damages of any kind which may in any manner arise out of the operation and maintenance of the portion of such plant leased to the city.

CHARGES TO BE PAID THE UNITED STATES

(12) In consideration of this contract, the municipality agrees (1) to pay the United States for the use of falling water for generation of energy for the municipality as follows:

(*a*) One and sixty-three hundredths mills ($0.00163) per kilowatt-hour (delivered at transmission voltage) for all firm energy contracted for by it;

(2) To pay the United States for credit to the city on account of use of the leased equipment as herein elsewhere provided; and

(3) To pay the United States for credit to the city on account of maintenance of said equipment in first-class operating condition, including repairs to and replacements of machinery; provided, however, that if the expenditures for replacements shall exceed at any time the sum accumulated by the city as a depreciation reserve in accordance with rules and regulations prescribed by the Secretary pursuant to the Boulder Canyon project act, less all amounts previously withdrawn for replacements, then the rates aforesaid shall be readjusted as hereinafter provided so as to reimburse the city for such excess expenditures within the term of this contract.

At the end of fifteen (15) years from the date of execution of said Exhibit A (April 26, 1930), and every ten (10) years thereafter, the above rates of payment for energy shall be readjusted upon demand of either party hereto, either upward or downward as to price, as the Secretary may find to be justified by competitive conditions at distributing points or competitive centers.

The rate for falling water for generation of firm energy which shall be uniform for both lessees and the municipality provided for by any such readjustment shall be arrived at by deducting from the price of electrical energy justified by competitive conditions at distributing points or competitive centers—(1) all fixed and operating costs of transmission to such points; (2) all fixed and operating costs of such portion of the power-plant machinery as is to be operated and maintained by the several lessees, including the cost of repairs and replacements together with such readjustment as to replacements as is provided for in paragraph 3 in this article; it being understood that such readjusted rates shall under no circumstances exceed the value of said energy based upon competitive conditions at distributing points or competitive centers.

The charges agreed to be paid by the municipality to the United States for credit to the city as generating agency in this article shall be such proportion of the cost incurred by such generating agency as it and the city may agree, or failing such agreement as the Secretary may determine.

The term "cost," as used with reference to generating energy, shall include a proper proportionate allowance for amortization for the cost of machinery and equipment as provided in paragraph *a* of article 9 of Exhibit A hereof, and interest on the prepayments thereof made by the city, a proper proportionate part of any annuity set-up in accordance with regulations of the Secretary provided for in subdivision 3 of article sixteen (16) of Exhibit A hereof, and any additional expenditures made by the city with the approval of the Secretary, for the purpose of meeting the obligation of the city to make replacements; and a proper proportionate part of the actual outlay of the city for operating such machinery and equipment and keeping the same in repair including reasonable overhead charges. The extent of the allowance for the several items in the event of disagreement between the city and municipality, and the system of accounting therefor, shall be prescribed by the Secretary under uniform regulations as required by section 6 of the Boulder Canyon project act.

MONTHLY PAYMENTS AND PENALTIES

(13) The municipality shall pay monthly for energy in accordance with the rates established or provided for herein, and for the generation thereof as provided in article twelve (12).

When energy taken in any month is not in excess of one-twelfth (1/12) of the minimum annual obligation, bill for such month shall be computed at the rate for firm energy in effect when such energy was taken on the basis of the actual amount of energy used during such month; provided, however, that the bill for the month of May shall not be less than the difference between the minimum annual payment, as provided in article fourteen (14) hereof, and the sum of the amounts charged for firm energy during the preceding eleven months. The United States will submit bills to the municipality by the fifth of each month immediately following the month during which the energy is generated, and payments shall be due on the first day of the month immediately succeeding. If such charges are not paid when due, a penalty of one per centum (1%) of the amount unpaid shall be added thereto, and thereafter an additional penalty of one per centum (1%) of the amount unpaid shall be added on the first day of each calendar month thereafter during such delinquency.

The monthly charge for generation of such energy to be credited to the generating agency shall be in such amount as may be determined in accordance with article twelve (12) hereof.

MINIMUM ANNUAL PAYMENT

(14) The minimum quantity of firm energy which the municipality shall take and/or pay for each year (June 1 to May 31, inclusive), under the terms of this contract, and after the same is ready for delivery to the municipality, as provided in subdivision (*a*) of article eleven (11) hereof, shall be 1.8867% of all firm energy as defined in article nine (9) hereof, available in said year. The total payments made by the municipality for firm energy available in any year (June 1 to May 31, inclusive), whether any energy is taken by it, or not, exclusive of its payments for credit to the generating agency, shall be not less than the number of kilowatt-hours of firm energy which the municipality is obligated to take and/or pay for during said year, multiplied by one and sixty-three hundredths mills ($0.00163), or multiplied by the adjusted rate of payment for firm energy in case the said rate is adjusted as provided in article twelve (12) hereof. For a fractional year at the beginning or end of the contract period, the minimum annual payment for firm energy shall be proportionately adjusted in the ratio that the number of days water is available for generation of energy in such fractional year bears to three hundred sixty-five (365). Provided, that the minimum annual payment shall be reduced in case of interruptions or curtailment of delivery of water as provided in article seventeen (17) hereof.

The minimum annual payments made by the municipality for generation of such energy, to be credited to the generating agency, shall be determined in accordance with article twelve (12) hereof.

NO ENERGY TO BE DELIVERED WITHOUT PAYMENT

(15) Unless the written consent of the Secretary be first obtained, no electrical energy shall be generated for, or delivered to, the munici-

pality if it shall be in arrears for more than twelve (12) months in the payment of any charge and/or penalty due or to become due the United States hereunder, whether for its own use or for credit to the generating agency.

CONTRACT MAY BE TERMINATED IN CASE OF BREACH

(16) If the municipality shall be in arrears for more than twelve (12) months in the payment of any charge and/or penalty due or to become due to the United States hereunder, and shall not have obtained an extension of time for payment thereof, or, if such extension be obtained, has not made such payment within the time as extended, then the Secretary reserves the right forthwith upon written notice to the municipality to terminate this contract and dispose of the energy herein allocated as he may see fit; provided, he shall first give opportunity to the city to contract on terms and conditions to be prescribed by the Secretary, for such energy, and provided further, that such disposition shall be subject to the condition that the municipality shall have the right at any time within ten (10) years from date of the first of the defaults or breaches for which the contract is terminated, to become reinstated hereunder by payment to the United States of all arrearages and penalties, if any, together with any and all loss incurred by the United States by reason of such termination, and compensation to the contractor or contractors for equipment rendered idle by such reinstatement. In case of disagreement or dispute as to any of the items so to be paid the same shall be determined as provided in article 22 hereof. Nothing contained in this contract shall relieve the municipality from the obligation to make the United States whole, for the period of this contract, for all loss and/or damage occasioned by the failure of the municipality to take and/or pay for energy as provided in this contract. The waiver of a breach of any of the provisions of this contract shall not be deemed to be a waiver of any other provisions hereof, or of a subsequent breach of such provision.

INTERRUPTIONS IN DELIVERY OF WATER

(17) The United States will deliver water continuously to each essee in the quantity, in the manner, and at the times necessary for the generation of the energy which each of said lessees has the right and/or obligation to generate under this contract in accordance with the load requirements of each of said lessees, and of allottees for which the respective lessees are generating agencies, excepting only that such delivery shall be regulated so as not to interfere with the necessary use of said Hoover Dam and Boulder Canyon Reservoir for river regulation, improvement of navigation, flood control, irrigation, or domestic uses, and the satisfaction of present perfected rights in or to the waters of the Colorado River, or its tributaries, in pursuance of Article VIII of the Colorado River compact, and this contract is made upon the express condition, and with the express covenant, that the rights of the municipality to the waters of the Colorado River, or its tributaries, are subject to, and controlled by, the Colorado River compact. The United States reserves the right temporarily to discontinue or reduce the delivery of water for the generation of energy at any time for the purpose of maintenance, repairs, and/or replacements, or installation of equipment, and for investigations and inspections necessary

thereto; provided, however, that the United States shall except in case of emergency give to the lessees reasonable notice in advance of such temporary discontinuance or reduction, and that the United States shall make such inspections and perform such maintenance and repair work after consultation with the lessees at such times and in such manner as will cause the least inconvenience to the lessees, and shall prosecute such work with diligence, and, without unnecessary delay, will resume delivery of water so discontinued or reduced. Should the delivery of water be discontinued or reduced below the amount required for the normal generation of firm energy for the payment of which said municipality has hereby obligated itself, the total number of hours of such discontinuance or reduction in any year shall be determined by taking the sum of the number of hours during which the delivery of water is totally discontinued, and the product of the number of hours during which the delivery of water is partially reduced and the percentage of said partial reduction below the actual quantity of water required by the lessees, severally, for the normal generation of firm energy. Total or partial reductions in delivery of water which do not reduce the power output below the amount required at the time by such lessee for the normal generation of firm energy, will not be considered in determining the total hours of discontinuance in any year. The minimum annual payment specified in article fourteen (14) hereof shall be reduced by the ratio that the total number of hours of such discontinuance bears to eight thousand seven hundred sixty (8,760). In no event shall any liability accrue against the United States, its officers, agents and/or employees, for any damage, direct or indirect, arising on account of drought, hostile diversion, act of God, or of the public enemy, or other similar cause; nevertheless interruptions in delivery of water occasioned by such causes shall be governed as hereinabove provided in this article.

MEASUREMENT OF ENERGY

(18) All energy shall be measured at generator voltage and suitable metering equipment shall be provided and installed by the United States for this purpose. Suitable correction shall be made in the amounts of energy as measured at generator voltage to cover step-up transformer losses and energy required for operation of station auxiliaries, in determining the amounts of energy delivered at transmission voltage as provided in this contract. The said meter equipment shall be maintained by and at the expense of the respective lessees. Meters shall be tested at any reasonable time upon the request of either the United States or a lessee, and in any event they shall be tested at least once each year. If the test discloses that the error of any meter exceeds one per centum (1%), such meter shall be adjusted so that the error does not exceed one-half of one per centum (½%). Meter equipment shall be tested by means of suitable testing equipment which will be provided by the United States, and which shall be calibrated by the United States Bureau of Standards as often as requested by any party hereto. Meters shall be kept sealed, and the seals shall be broken only in the presence of representatives of both the United States and the lessees respectively and likewise all test of meter equipment shall be conducted only when representatives of both the United States and the respective lessees are present. In the event that energy

furnished to the municipality at Boulder Canyon is transmitted over lines of another contractor, the meters at Boulder Canyon will record only the total amounts of energy delivered to the operators of main transmission lines and it will not be possible to determine from these meters the division of the energy between the various municipalities and the operator. The municipality or the operator of said lines shall provide suitable meter equipment, satisfactory to the Secretary, at the point where the energy is delivered by the operator of said lines to the municipality, for determining the amounts of energy delivered to the municipality at said point and to these amounts there shall be added proper corrections to cover transformer and line losses in determining the amounts of energy furnished to the municipality at Boulder Canyon. The Secretary's determination of said amounts shall be conclusive.

INSPECTION BY THE UNITED STATES

(19) The Secretary or his representatives shall have free access at all reasonable times to the books and records of the municipality relating to the disposal of electrical energy, with the right at any time during office hours to make copies of or from the same.

TRANSMISSION

(20) The city having, in article twenty-five (25) of Exhibit A hereof, undertaken that it shall construct, operate, and maintain at cost, including allowance for necessary overhead expense, the main transmission lines required for transmitting all Boulder Canyon energy allocated to the municipality to the receiving station at the Pacific coast end of the city's main transmission lines, the municipality agrees to pay its pro rata of the cost of construction, operation, and maintenance of said lines as it and the city may agree, and the Secretary will, when notified by the city that arrangements to that effect have been concluded by the city and municipality, cause delivery of energy at transmission voltage to be made accordingly. In the event that an operator of main transmission lines other than the city transmits the energy allocated to the municipality pursuant to Exhibit A, article 25 (*b*), the obligation of the municipality under this paragraph shall apply for the benefit of such other operator as though it has been named herein instead of the city. In any event, disputes and disagreements between the municipality and the operator of main transmission lines shall be determined in accordance with article 22 (*a*) hereof. Nothing herein contained, however, shall relieve the municipality of the obligation to pay the United States for energy contracted for by it, whether transmitted or not.

DURATION OF CONTRACT

(21) This contract shall not become effective for any purpose unless on or before November 16, 1931, two-thirds of the qualified electors of the municipality, voting at an election to be held for that purpose, have assented that the municipality shall incur the indebtedness and liability of this contract, and make provision for the collection of an annual tax sufficient to pay to the United States each year the minimum annual obligation of the municipality under this contract, or any portion thereof not paid from other sources. After having become effective this contract shall remain in effect until

the expiration of a period of fifty (50) years from the date at which energy is ready for delivery to the city, as announced by the Secretary. The holder of any contract for electrical energy, including the municipality, not in default thereunder, shall be entitled to a renewal thereof upon such terms and conditions as may be authorized or required under the then existing laws and regulations, unless the property of such holder dependent for its usefulness on a continuation of the contract be purchased or acquired and such contractor be compensated for damages to its property, used and useful in the transmission and distribution of such electrical energy and not taken, resulting from the termination of the supply.

DISPUTES AND DISAGREEMENTS

(22) (*a*) Disputes or disagreements arising under this contract between the municipality and any lessee or other allottee shall be arbitrated by three arbitrators, except where otherwise provided in this contract. The municipality shall name one arbitrator and the other disputant shall name one. These two shall name the third. If either disputant has notified the other that arbitration is demanded and that it has named an arbitrator, and if thereafter the other disputant fails to name an arbitrator for fifteen days, the Secretary, if requested by either disputant, shall name such arbitrator, who shall proceed as though named by the disputant. The two arbitrators so named shall meet within five days after appointment of the second and name the third. If they fail to do so, the Secretary will, on request by either disputant or arbitrator, name the third. A decision by any two of the three arbitrators shall be binding on the disputants and enforceable by court proceedings or by the Secretary in his discretion. Arbitration as herein provided, or the failure of the arbitrators to render a decision within six months of appointment of the third arbitrator, shall be a condition precedent to suit by either disputant against the other upon the matter in dispute.

(*b*) Disputes or disagreements between the United States and the municipality as to the interpretation or performance of the provisions of this contract shall be determined either by arbitration or court proceedings, the Secretary of the Interior being authorized to act for the United States in such proceedings. Whenever a controversy arises out of this contract, and the disputants agree to submit the matter to arbitration, the municipality shall name one arbitrator and the Secretary shall name one arbitrator, and the two arbitrators thus chosen shall elect three other arbitrators, but in the event of their failure to name all or any of the three arbitrators within five (5) days after their first meeting, such arbitrators, not so elected, shall be named by the senior judge of the United States Circuit Court of Appeals for the Ninth Circuit. The decision of any three of such arbitrators shall be a valid and binding award of the arbitrators.

USE OF PUBLIC AND RESERVED LANDS OF THE UNITED STATES

(23) The use is authorized of such public and reserved lands of the United States as may be necessary or convenient for the construction, operation, and maintenance of main transmission lines, to transmit electrical energy generated at Hoover Dam, together with the use of such public and reserved lands of the United States as may be desig-

nated by the Secretary, from time to time, for camp sites, residences for employees, warehouses, and other uses incident to the operation and maintenance of the power plant and incidental works.

PRIORITY OF CLAIMS OF THE UNITED STATES

(24) Claims of the United States arising out of this contract shall have priority over all others, secured or unsecured, and the municipality shall exercise all its powers including the power of taxation, and the powers of assessment, levying and collection of taxes of every kind, which the municipality has or may acquire, for the provision of funds which may become due to the United States under this contract.

TRANSFER OF INTEREST IN CONTRACT

(25) No voluntary transfer of this contract, or of the rights hereunder, shall be made without the written approval of the Secretary; and any successor or assign of the rights of the municipality, whether by voluntary transfer, judicial sale, foreclosure sale, or otherwise, shall be subject to all the conditions of the Boulder Canyon project act and also subject to all the provisions and conditions of this contract to the same extent as though such successor or assign were the original contractor hereunder; provided, that a mortgage or trust deed or judicial sales made thereunder shall not be deemed voluntary transfers within the meaning of this article.

RULES AND REGULATIONS

(26) This contract is subject to such rules and regulations conforming to the Boulder Canyon project act as the Secretary may from time to time promulgate; provided, however, that no right of the municipality hereunder shall be impaired or obligation of the municipality hereunder shall be extended thereby; and provided further that opportunity for hearing shall be afforded the municipality by the Secretary prior to promulgation thereof.

AGREEMENT SUBJECT TO COLORADO RIVER COMPACT

(27) This contract is made upon the express condition and with the express understanding that all rights hereunder shall be subject to and controlled by the Colorado River compact, being the compact or agreement signed at Santa Fe, N. Mex., November 24, 1922, pursuant to act of Congress approved August 19, 1921, entitled "An act to permit a compact or agreement between the States of Arizona, California, Colorado, Nevada, New Mexico, Utah, and Wyoming, respecting the disposition and apportionment of the waters of the Colorado River, and for other purposes," which compact was approved in section 13 (*a*) of the Boulder Canyon project act.

CONTINGENT UPON APPROPRIATIONS

(28) This contract is subject to appropriations being made by Congress from year to year of moneys sufficient to do the work provided for herein, and to there being sufficient moneys available in the Colorado River Dam fund to permit allotments to be made for the performance of such work. No liability shall accrue against the United States, its officers, agents, or employees, by reason of sufficient

moneys not being so appropriated or on account of there not being sufficient moneys in the Colorado River Dam fund to permit of said allotments. This agreement is also subject to the condition that if for any other reason construction of Hoover Dam is not prosecuted to completion with reasonable diligence, then and in such event either party hereto may terminate its obligations hereunder upon one (1) year's written notice to the other party hereto.

TITLE TO REMAIN IN UNITED STATES

(29) As provided by section six (6) of the Boulder Canyon project act, the title to Hoover Dam, reservoir, plant, and incidental works shall forever remain in the United States.

REMEDIES UNDER CONTRACT NOT EXCLUSIVE

(30) Nothing contained in this contract shall be construed as in any manner abridging, limiting, or depriving the United States of any means of enforcing any remedy either at law or in equity for the breach of any of the provisions hereof which it would otherwise have.

MEMBER OF CONGRESS CLAUSE

(31) No Member of or Delegate to Congress or Resident Commissioner shall be admitted to any share or part of this contract, or to any benefit that may arise therefrom. Nothing, however, herein contained shall be construed to extend to this contract if made with a corporation for its general benefit.

In witness whereof, the parties hereto have caused this contract to be executed the day and year first above written.

THE UNITED STATES OF AMERICA,
Attest: By RAY LYMAN WILBUR,
Secretary of the Interior.

THE CITY OF GLENDALE,
By FRANK P. TAGGART,
Mayor.

Approved as to form:
By BERNARD BRENNAN,
City Attorney.

Attest:
G. E. CHAPMAN,
City Clerk.

EXHIBIT A

Omitted. Consists of Appendix 2, supra.

[APPENDIX 8]

BOULDER CANYON PROJECT

CONTRACT FOR ELECTRICAL ENERGY

THE UNITED STATES
AND
THE CITY OF BURBANK
November 10, 1931

CONTRACT FOR ELECTRICAL ENERGY

Article

CONTRACT FOR ELECTRICAL ENERGY

(1) This contract, made this 10th day of November, nineteen hundred thirty-one, pursuant to the act of Congress approved June 17, 1902 (32 Stat. 388), and acts amendatory thereof or supplementary thereto, all of which acts are commonly known and referred to as the reclamation law, and particularly pursuant to the act of Congress approved December 21, 1928 (45 Stat. 1057), designated the Boulder Canyon project act, between the United States of America, hereinafter referred to as the United States, acting for this purpose by Ray Lyman Wilbur, Secretary of the Interior, hereinafter styled the Secretary, and the City of Burbank, a municipal corporation, organized and existing under and by virtue of the laws of the State of California hereinafter styled the municipality.

Witnesseth:

EXPLANATORY RECITALS

(2) Whereas, for the purpose of controlling the floods, improving navigation, and regulating the flow of the Colorado River, providing for storage and for the delivery of the stored waters for reclamation of public lands and other beneficial uses exclusively within the United States, and for the generation of electrical energy, the Secretary, subject to the terms of the Colorado River compact, is authorized to construct, operate, and maintain a dam and incidental works in the main stream of the Colorado River at Black Canyon or Boulder Canyon, adequate to create a storage reservoir of a capacity of not less than twenty million acre-feet of water; also to construct, equip, operate, and maintain at or near said dam, or cause to be constructed, a complete plant and incidental structures suitable for the fullest economic development of electrical energy from the water discharged from said reservoir; and

(3) Whereas, after full consideration of the advantages of both the Black Canyon and Boulder Canyon dam sites, the Secretary has determined upon Black Canyon as the site of the aforesaid dam, hereinafter styled the Hoover Dam, and has determined that the revenues provided for by this contract, together with other contracts in accordance with the provisions of the Boulder Canyon project act, are adequate in his judgment to insure payment of all expenses of operation and maintenance of the Hoover Dam and appurtenant works incurred by the United States, and the repayment within fifty (50) years from the date of completion of said works of all amounts advanced to the Colorado River Dam fund under subdivision (*b*) of section 2 of the Boulder Canyon project act, together with interest thereon made reimbursable under said act; and

(4) Whereas, the United States has entered into an agreement of date April 26, 1930, with the City of Los Angeles (hereinafter styled the city), and Southern California Edison Co. (Ltd.) (hereinafter styled the company), severally (both hereinafter referred to as the lessees) for the lease, and the operation and maintenance, of a Government-built power plant to be constructed at Hoover Dam, together

with the right to generate electrical energy (a copy of which said lease as amended by supplemental agreements of date May 28, 1930, and September 23, 1931, is attached hereto marked Exhibit A, and by this reference made a part hereof); and whereas in said lease the Secretary has reserved the authority to, and in consideration of the execution thereof is authorized by each of the aforesaid lessees, severally, to contract with the other allottees named in the allocation set forth therein for the furnishing of energy to such allottees at transmission voltage in accordance with the allocation to each allottee, and the Secretary is therein granted by each lessee, severally, the power in accordance with the provisions thereof to enforce as against each lessee the rights to be acquired by such other allottees by contracts to be entered into with the United States; and whereas in said lease the city has agreed to generate energy allocated to the municipality; and

(5) Whereas, the municipality is desirous of entering into a contract for the purchase of electrical energy to be generated at the power plant to be leased, as aforesaid, to the city;

(6) Now, therefore, in consideration of the mutual covenants herein contained the parties hereto agree as follows, to wit:

ALLOCATION OF ELECTRICAL ENERGY

(7) The United States will cause electrical energy to be delivered to the municipality at Hoover Dam under and in pursuance of and subject to the provisions of the aforesaid lease, attached hereto as Exhibit A, for a period of fifty (50) years from the date at which energy is ready for delivery to the city, as announced by the Secretary, in accordance with the following allocation, to wit:

Of firm energy, as defined in article nine (9) hereof:

A. To the State of Nevada, for use in Nevada, not exceeding eighteen per centum (18%) of said total firm energy.

B. To the State of Arizona, for use in Arizona, not exceeding eighteen per centum (18%) of said total firm energy. Should either of the States not take its full eighteen per centum (18%) allocation within a period of twenty (20) years hereof, the other may then contract for the energy not so taken up to four per centum (4%) of the total firm energy; provided, that the combined amount used by the two States shall not, at any time, exceed thirty-six per centum (36%) of such total firm energy.

C. To the Metropolitan Water District of Southern California for pumping Colorado River water into and in its aqueduct for the use of such district within the following limits:

(1) Thirty-six per centum (36%) of said total firm energy, plus

(2) All secondary energy developed at the Hoover Dam power plant as provided in article fourteen (14) hereof; plus

(3) So much of the firm energy allocated to the States, the city, and the company as may not be in use by them. Energy allocated to the States, but not in use by them, shall be released to the district by the two lessees equally (unless they agree upon a different ratio) as follows:

(*a*) If the district makes a firm contract with the Secretary for the balance of the lease period for part or all of such unused States energy (subject to the first right of the

States thereto) such contract shall be made effective upon two years' written notice to the Secretary, and compensation to the lessees, respectively, for main transmission line property rendered idle;

(*b*) If the district does not so make a firm contract for such energy, then energy allocated to the States but not in use by them, shall be released to the district upon not less than fifteen months' written notice to the Secretary and at such compensation as the district and such lessees, respectively, may agree upon, to cover cost and overhead of replacing energy which otherwise would have been received at the Pacific coast end of the main transmission lines by the lessees, respectively. Such cost shall include interest on and depreciation and operation and maintenance of the plant capacity while required for the generation of such substitute energy; and also appropriate allowance for interest on and maintenance and depreciation of plant capacity rendered idle because of cessation of generation of such substitute energy until such time as such plant capacity would otherwise have been installed by the lessees, respectively, for their own requirements. If the district and the respective lessees fail to agree on such compensation, such energy shall nevertheless be released to the district, and the disagreement shall be determined in accordance with article twenty-two (22) (*a*) hereof. Such determination shall include allowance for items of cost and overhead as specified in this paragraph. Pending such determination, energy so released shall be paid for by the district at the rate for firm energy but the determination of compensation under article twenty-two (22) (*a*) hereof shall not be controlled by such rate.

During any year beginning June 1, the district shall not use any secondary energy or any unused State energy, until it has first used subsequent to June 1, next preceding, an amount of firm energy equivalent to one-twelfth of the amount of firm energy it is obligated to take and/or pay for annually multiplied by the number of months elapsed since June 1 next preceding.

(4) If, due to temporary deficiency in secondary energy regularly used by the district, substitute energy is requested by the district in excess of the energy made available under the foregoing subparagraph (3) (*b*) the city and/or the company may release so much energy as may be practicable on the same terms as provided in subsection (3) (*b*) preceding.

D. To the municipalities of Anaheim, Beverly Hills, Burbank, Colton, Fullerton, Glendale, Newport Beach, Pasadena, Riverside, San Bernardino, and Santa Ana (referred to herein as "the municipalities"), six per centum (6%) in all, whereof 9.8266 per centum (9.8266%) of said six per centum (6%), being 0.5896 per centum (0.5896%) of all firm energy, shall be taken and/or paid for by the city of Burbank.

E. To the City of Los Angeles, thirteen per centum (13%).

F. To Southern California Edison Co. (Ltd.), the Southern Sierras Power Co., the San Diego Consolidated Gas & Electric Co., and the Los Angeles Gas & Electric Corporation, referred to herein as the companies, nine per centum (9%) in all, division whereof between the companies shall be made according to mutual agreement among them, if possible. If no such agreement is submitted to the Secretary on or before November 16, 1931, the Secretary shall determine the allocation of each.

It is further agreed that—

(I) So much of the energy allocated to the States (thirty-six per centum (36%) of the firm energy) and not in use by them, or, failing their use, by the district, for the above purposes, shall be taken and paid for one-half by the city and one-half by the company. In addition, all firm energy allocated to the city (thirteen per centum (13%)), shall be taken and paid for by the city.

(II) All of the energy allocated to the municipalities may be contracted for in compliance with regulations of the Secretary, by any one or more of them, on or before November 16, 1931. So much of the energy allocated to the municipalities as is not so contracted for, or, if contracted for, not used by them directly or under contract for municipal purposes and/or distribution to their inhabitants, shall be taken and paid for by the city.

(III) So much of the energy allocated to the Southern Sierras Power Co., the San Diego Consolidated Gas & Electric Co., and the Los Angeles Gas & Electric Corporation as is not firmly contracted for by them, severally, in compliance with regulations of the Secretary on or before November 16, 1931, shall be taken and paid for by the company.

(IV) If any allottee is permitted by the United States to divert water from the reservoir at a time when the reservoir is not spilling, in consequence of which the amount of energy which would have been utilized is diminished, such diminution shall be debited to the allocation of firm energy herein made to such allottee; and charge for the energy equivalent of such diversion shall be made, and the amount of energy which the allottee shall otherwise be obligated to take and pay for hereunder shall be correspondingly reduced.

The reservoir shall be considered as spilling whenever water is being discharged in excess of the amount used for the generation of power, whether such waste occurs over the spillway or otherwise.

(V) Each of the States of Arizona and Nevada may, from time to time within the period of the aforesaid lease, contract for energy for use within such State in any amount until the total allocated, respectively, to each is in use as provided above; and may terminate such contract, or contracts, without prejudice to the right to again contract for such energy. All such contracts shall be executed with the Secretary. A contract requiring one thousand (1,000) horsepower (of maximum demand) or less may become effective or be terminated on six months' written notice of requirement or termination given the director by the State; provided, that the notice given shall be two years if in the twelve months preceding said notice of demand the total increment to such State has exceeded five thousand (5,000) horsepower of maximum demand or if in the twelve months preceding said notice of termination the decrement to such State has exceeded

five thousand (5,000) horsepower of maximum demand. In all cases the director shall immediately transmit such notice to each lessee. Whenever the amount in use is in excess of five thousand (5,000) horsepower of maximum demand, the lessees, respectively, shall be compensated for property rendered idle by use of such excess in such amount as the Secretary shall determine to be equitable. Firm energy not contracted for by the States shall be available for use by the district as herein elsewhere provided, and, if not in use by the States and/or the district, shall be taken and paid for equally by the two lessees. No right which may be available to a State under section five (5) (*c*) of the Boulder Canyon project act to execute a firm contract for electrical energy for use within the State shall be impaired by any provision of this contract.

Of secondary energy.

It is further agreed that the district shall have the right to purchase and use all secondary energy as provided in article nine (9) and article fourteen (14) hereof for the purposes stated in the first paragraph of subdivision (C) of this article. The city and the company shall each have the right to purchase and use one-half of all secondary energy not used by the district. Any such energy not used by one lessee shall be available, for the time being, to the other. If secondary energy is not taken by the district, the city, and/or the company, then and in such event the United States reserves the right to take, use, and dispose of such energy, from time to time, as it sees fit, giving credit therefor as provided in article twelve (12) of Exhibit A hereof.

Of firm energy allocated to but not used by the district.

It is further agreed that in the event the district shall fail for any reason to use all or any of the firm energy herein allotted to it for the only purpose for which said firm energy is allotted to it, that is, for pumping water into and in its aqueduct, then the Secretary shall dispose of such unused energy until required by the district for said purpose, crediting on the district's obligation the proceeds of such dissition as received; provided, however, that no disposition of such firm energy shall be made by the Secretary without first giving to a successor to the district which may undertake to build or maintain a Colorado River Aqueduct the opportunity to take said firm energy for the same purpose and under the same terms as those to which the district was obligated; and provided further, that in the event no such successor takes said firm energy as provided above, then no disposition of such firm energy shall be made by the Secretary without first giving to each lessee the opportunity to contract on equal terms and conditions, to be prescribed by the Secretary, for one-half of such energy together with such portion of the remainder as the other lessee shall not elect to take.

Of firm energy not hereinbefore disposed of.

It is further agreed that the United States reserves the right, in case the dam which it erects provides a maximum water surface elevation in excess of one thousand two hundred twenty-two (1,222) feet above sea level (United States Geological Survey datum), and thereby increases the quantity of firm energy above the quantity of four billion two hundred forty million (4,240,000,000) kilowatt-hours allocated above, to dispose of such increase, but not to exceed ninety million

(90,000,000) kilowatt-hours per year (June 1 to May 31, inclusive), to any municipality or municipalities by firm contract executed with the Secretary on or before November 16, 1931. Such disposition shall be without prejudice to any provision of this contract or of the allocation above referred to. So much of such additional energy as is not so contracted for shall be taken and paid for by the city. Generation of such additional energy shall in any event be effected by the city.

USE OF ENERGY

(8) It is agreed that the energy contracted for by the municipality shall be used by it (directly or under contract) for municipal purposes and/or distribution to its inhabitants, and that so much of the energy contracted for by it as is not so used may be temporarily delivered by the United States to the City of Los Angeles, crediting on the municipality's obligation the proceeds of such disposition as received; but nothing herein contained shall relieve the municipality from paying for all firm energy contracted for by it whether said energy is taken by the municipality or not.

FIRM AND SECONDARY ENERGY DEFINED

(9) The amount of firm energy for the first year of operation (June 1 to May 31, inclusive), following the date of the completion of the dam as announced by the Secretary shall be defined as being four billion two hundred forty million (4,240,000,000) kilowatt-hours at transmission voltage. For every subsequent year the amount defined as firm energy shall be decreased by eight million seven hundred sixty thousand (8,760,000) kilowatt-hours from that of the previous year.

Nevertheless, if it be determined by the Secretary that the rate of decrease of kilowatt-hours per year as above stated, is not in accord with actual conditions, the Secretary reserves the right to fix a lesser rate for any year (June 1 to May 31, inclusive), in advance.

If, by reason of international obligations arising through treaty or otherwise subsequent to the effective date of this contract, or by reason of interference with the program of construction and/or operation of the dam as provided for and contemplated by this contract, or by reason of other contingencies not now foreseen, the amount of firm energy available through the release of water from the Boulder Canyon Reservoir shall in fact be less than the amount of firm energy as above defined, then in any such event the obligation of the municipality to take electrical energy shall be reduced in an amount corresponding to such change. If for any reason the United States shall be wholly unable to fulfill its obligations hereunder in respect of the delivery of water, then the municipality may terminate this contract.

If the dam erected by the United States provides a maximum water surface elevation in excess of 1,222 feet above sea level (United States Geological Survey datum), the United States reserves the right to dispose of additional firm energy thereby made available, not to exceed ninety million (90,000,000) kilowatt-hours per year, subject to pro rata of the eight million seven hundred sixty thousand (8,760,000) kilowatt-hours annual diminution above provided for.

The term "secondary energy" wherever used herein shall mean all electrical energy generated in one year (June 1 to May 31, inclusive), in excess of the amount of firm energy as hereinabove defined, available in such year.

GENERATING AGENCIES

(10) In accordance with designation heretofore made by the Secretary, generation of energy allocated to the municipality shall be effected by the city, as agreed in Exhibit A annexed.

Disputes and disagreements between the municipality and the city generating energy for it, with respect to such generation, and/or the cost thereof, shall be determined by the Secretary.

DELIVERY OF ELECTRICAL ENERGY

(11) (*a*) Energy shall be ready for delivery to the city and to the municipalities, including those contracting under the last paragraph of article seven (7) hereof, when the Secretary announces that one billion two hundred fifty million (1,250,000,000) kilowatt-hours of energy per year is ready for delivery.

(*b*) Energy shall be ready for delivery to the district when the Secretary announces that two billion (2,000,000,000) kilowatt-hours of energy per year is available, which date, however, shall not be sooner than one (1) year after energy is ready for delivery to the city; provided, however, that the time when energy is ready for delivery to the district may be advanced subject to the approval of the Secretary, should the district so request, and that in such case the city shall be compensated by the district for interest and depreciation on and maintenance and operation of its main transmission line in case the total energy available to the city is reduced below one billion two hundred fifty million (1,250,000,000) kilowatt-hours per annum, in the proportion that such kilowatt-hours available to the city is less than one billion two hundred fifty million (1,250,000,000).

(*c*) Energy shall be ready for delivery to the company when the Secretary announces that water capable of generating four billion two hundred forty million (4,240,000,000) kilowatt-hours of energy per year is available, which date, however, shall not be sooner than three (3) years after commencement of delivery of energy to the city and which shall not be until the water surface in Boulder Canyon Reservoir on August 1 immediately preceding has reached an elevation of eleven hundred fifty (1,150) feet above sea level (United States Geological Survey datum).

(*d*) Upon written notification from the Secretary that generation equipment is ready for operation by it and water is available for generating energy therefrom, each lessee will be required to assume the operation and maintenance of its respective portion of the power plant, and thereafter the municipality shall not look to the United States for compensation for injury and/or damages of any kind which may in any manner arise out of the operation and maintenance of the portion of such plant leased to the city.

CHARGES TO BE PAID THE UNITED STATES

(12) In consideration of this contract, the municipality agrees (1) to pay the United States for the use of falling water for generation of energy for the municipality as follows:

(*a*) One and sixty-three hundredths mills ($0.00163), per kilowatt-hour (delivered at transmission voltage) for all firm energy contracted for by it;

(2) To pay the United States, for credit to the city, on account of use of the leased equipment as herein elsewhere provided; and

(3) To pay the United States, for credit to the city, on account of maintenance of said equipment in first-class operating condition, including repairs to and replacements of machinery; provided, however, that, if the expenditures for replacements shall exceed at any time the sum accumulated by the city as a depreciation reserve in accordance with rules and regulations prescribed by the Secretary, pursuant to the Boulder Canyon project act, less all amounts previously withdrawn for replacements, then the rates aforesaid shall be readjusted as hereinafter provided so as to reimburse the city for such excess expenditures within the term of this contract.

At the end of fifteen (15) years from the date of execution of said Exhibit A (April 26, 1930), and every ten (10) years thereafter, the above rates of payment for energy shall be readjusted upon demand of either party hereto, either upward or downward as to price, as the Secretary may find to be justified by competitive conditions at distributing points or competitive centers.

The rate for falling water for generation of firm energy which shall be uniform for both lessees and the municipality provided for by any such readjustment shall be arrived at by deducting from the price of electrical energy justified by competitive conditions at distributing points or competitive centers—(1) all fixed and operating costs of transmission to such points; (2) all fixed and operating costs of such portion of the power-plant machinery as is to be operated and maintained by the several lessees, including the cost of repairs and replacements, together with such readjustment as to replacements as is provided for in paragraph 3 in this article; it being understood that such readjusted rates shall under no circumstances exceed the value of said energy, based upon competitive conditions at distributing points or competitive centers.

The charges agreed to be paid by the municipality to the United States, for credit to the city as generating agency, in this article, shall be such proportion of the cost incurred by such generating agency as it and the city may agree, or, failing such agreement, as the Secretary may determine.

The term "cost," as used with reference to generating energy, shall include a proper proportionate allowance for amortization for the cost of machinery and equipment as provided in paragraph *a* of article 9 of Exhibit A hereof, and interest on the prepayments thereof made by the city, a proper proportionate part of any annuity set up in accordance with regulations of the Secretary provided for in subdivision 3 of article sixteen (16) of Exhibit A hereof, and any additional expenditures made by the city with the approval of the Secretary, for the purpose of meeting the obligation of the city to make replacements; and a proper proportionate part of the actual outlay of the city for operating such machinery and equipment and keeping the same in repair, including reasonable overhead charges. The extent of the allowance for the several items in the event of disagreement between the city and municipality, and the system of accounting therefor, shall be prescribed by the Secretary under uniform regulations as required by section 6 of the Boulder Canyon project act.

MONTHLY PAYMENTS AND PENALTIES

(13) The municipality shall pay monthly for energy in accordance with the rates established or provided for herein, and for the generation thereof as provided in article twelve (12).

When energy taken in any month is not in excess of one-twelfth (1/12) of the minimum annual obligation, bill for such month shall be computed at the rate for firm energy in effect when such energy was taken on the basis of the actual amount of energy used during such month; provided, however, that the bill for the month of May shall not be less than the difference between the minimum annual payment, as provided in article fourteen (14) hereof, and the sum of the amounts charged for firm energy during the preceding eleven months. The United States will submit bills to the municipality by the fifth of each month immediately following the month during which the energy is generated, and payments shall be due on the first day of the month immediately succeeding. If such charges are not paid when due, a penalty of one per centum (1%) of the amount unpaid shall be added thereto, and thereafter an additional penalty of one per centum (1%) of the amount unpaid shall be added on the first day of each calendar month thereafter during such delinquency.

The monthly charge for generation of such energy to be credited to the generating agency shall be in such amount as may be determined in accordance with article twelve (12) hereof.

MINIMUM ANNUAL PAYMENT

(14) The minimum quantity of firm energy which the municipality shall take and/or pay for each year (June 1 to May 31, inclusive), under the terms of this contract, and after the same is ready for delivery to the municipality, as provided in subdivision (*a*) of article eleven (11) hereof, shall be 0.5896% of all firm energy as defined in article nine (9) hereof, available in said year. The total payments made by the municipality for firm energy available in any year (June 1 to May 31, inclusive), whether any energy is taken by it or not, exclusive of its payments for credit to the generating agency, shall be not less than the number of kilowatt-hours of firm energy which the municipality is obligated to take and/or pay for during said year, multiplied by one and sixty-three hundredths mills ($0.00163), or multiplied by the adjusted rate of payment for firm energy in case the said rate is adjusted as provided in article twelve (12) hereof. For a fractional year at the beginning or end of the contract period, the minimum annual payment for firm energy shall be proportionately adjusted in the ratio that the number of days water is available for generation of energy in such fractional year bears to three hundred sixty-five (365); provided, that the minimum annual payment shall be reduced in case of interruptions or curtailment of delivery of water as provided in article seventeen (17) hereof.

The minimum annual payments made by the municipality for generation of such energy, to be credited to the generating agency, shall be determined in accordance with article twelve (12) hereof.

NO ENERGY TO BE DELIVERED WITHOUT PAYMENT

(15) Unless the written consent of the Secretary be first obtained, no electrical energy shall be generated for, or delivered to, the munici-

pality if it shall be in arrears for more than twelve (12) months in the payment of any charge and/or penalty due or to become due the United States hereunder, whether for its own use or for credit to the generating agency.

CONTRACT MAY BE TERMINATED IN CASE OF BREACH

(16) If the municipality shall be in arrears for more than twelve (12) months in the payment of any charge and/or penalty due or to become due to the United States hereunder, and shall not have obtained an extension of time for payment thereof, or if such extension be obtained, has not made such payment within the time as extended, then the Secretary reserves the right forthwith upon written notice to the municipality to terminate this contract and dispose of the energy herein allocated as he may see fit; provided, he shall first give opportunity to the city to contract on terms and conditions to be prescribed by the Secretary, for such energy, and provided further, that such disposition shall be subject to the condition that the municipality shall have the right at any time within ten (10) years from date of the first of the defaults or breaches for which the contract is terminated, to become reinstated hereunder by payment to the United States of all arrearages and penalties, if any, together with any and all loss incurred by the United States by reason of such termination, and compensation to the contractor or contractors for equipment rendered idle by such reinstatement. In case of disagreement or dispute as to any of the items so to be paid the same shall be determined as provided in article 22 hereof. Nothing contained in this contract shall relieve the municipality from the obligation to make the United States whole, for the period of this contract, for all loss and/or damage occasioned by the failure of the municipality to take and/or pay for energy as provided in this contract. The waiver of a breach of any of the provisions of this contract shall not be deemed to be a waiver of any other provisions hereof, or of a subsequent breach of such provision.

INTERRUPTIONS IN DELIVERY OF WATER

(17) The United States will deliver water continuously to each lessee in the quantity, in the manner, and at the times necessary for the generation of the energy which each of said lessees has the right and/or obligation to generate under this contract in accordance with the load requirements of each of said lessees, and of allottees for which the respective lessees are generating agencies, excepting only that such delivery shall be regulated so as not to interfere with the necessary use of said Hoover Dam and Boulder Canyon Reservoir for river regulation, improvement of navigation, flood control, irrigation, or domestic uses, and the satisfaction of present perfected rights in or to the waters of the Colorado River, or its tributaries, in pursuance of Article VIII of the Colorado River compact, and this contract is made upon the express condition, and with the express covenant, that the rights of the municipality to the waters of the Colorado River, or its tributaries, are subject to, and controlled by, the Colorado River compact. The United States reserves the right temporarily to discontinue or reduce the delivery of water for the generation of energy at any time for the purpose of maintenance, repairs, and/or replacements, or installation of equipment, and for investigations and

inspections necessary thereto; provided, however, that the United States shall, except in case of emergency, give to the lessees reasonable notice in advance of such temporary discontinuance or reduction, and that the United States shall make such inspections and perform such maintenance and repair work after consultation with the lessees at such times and in such manner as will cause the least inconvenience to the lessees, and shall prosecute such work with diligence, and without unnecessary delay, will resume delivery of water so discontinued or reduced. Should the delivery of water be discontinued or reduced below the amount required for the normal generation of firm energy for the payment of which said municipality has hereby obligated itself, the total number of hours of such discontinuance or reduction in any year shall be determined by taking the sum of the number of hours during which the delivery of water is totally discontinued, and the product of the number of hours during which the delivery of water is partially reduced and the percentage of said partial reduction below the actual quantity of water required by the lessees, severally, for the normal generation of firm energy. Total or partial reductions in delivery of water which do not reduce the power output below the amount required at the time by such lessee for the normal generation of firm energy, will not be considered in determining the total hours of discontinuance in any year. The minimum annual payment specified in article fourteen (14) hereof shall be reduced by the ratio that the total number of hours of such discontinuance bears to eight thousand seven hundred sixty (8,760). In no event shall any liability accrue against the United States, its officers, agents, and/or employees, for any damage, direct or indirect, arising on account of drought, hostile diversion, act of God, or of the public enemy, or other similar cause; nevertheless, interruptions in delivery of water occasioned by such causes shall be governed as hereinabove provided in this article.

MEASUREMENT OF ENERGY

(18) All energy shall be measured at generator voltage and suitable metering equipment shall be provided and installed by the United States for this purpose. Suitable correction shall be made in the amounts of energy as measured at generator voltage to cover step-up transformer losses and energy required for operation of station auxiliaries, in determining the amounts of energy delivered at transmission voltage as provided in this contract. The said meter equipment shall be maintained by and at the expense of the respective lessees. Meters shall be tested at any reasonable time upon the request of either the United States or a lessee, and in any event they shall be tested at least once each year. If the test discloses that the error of any meter exceeds one per centum (1%), such meter shall be adjusted so that the error does not exceed one-half of one per centum (½%). Meter equipment shall be tested by means of suitable testing equipment which will be provided by the United States and which shall be calibrated by the United States Bureau of Standards as often as requested by any party hereto. Meters shall be kept sealed and the seals shall be broken only in the presence of representatives of both the United States and the lessees respectively, and likewise all tests of meter equipment shall be conducted only when representatives of both the United States and the respective lessees are present. In the event that energy

furnished to the municipality at Boulder Canyon is transmitted over lines of another contractor, the meters at Boulder Canyon will record only the total amounts of energy delivered to the operators of main transmission lines and it will not be possible to determine from these meters the division of the energy between the various municipalities and the operator. The municipality or the operator of said lines shall provide suitable meter equipment, satisfactory to the Secretary, at the point where the energy is delivered by the operator of said lines to the municipality, for determining the amounts of energy delivered to the municipality at said point and to these amounts there shall be added proper corrections to cover transformer and line losses in determining the amounts of energy furnished to the municipality at Boulder Canyon. The Secretary's determination of said amounts shall be conclusive.

INSPECTION BY THE UNITED STATES

(19) The Secretary or his representatives shall have free access at all reasonable times to the books and records of the municipality relating to the disposal of electrical energy, with the right at any time during office hours to make copies of or from the same.

TRANSMISSION

(20) The city having, in article twenty-five (25) of Exhibit A hereof, undertaken that it shall construct, operate, and maintain at cost, including allowance for necessary overhead expense, the main transmission lines required for transmitting all Boulder Canyon energy allocated to the municipality to the receiving station at the Pacific coast end of the city's main transmission lines, the municipality agrees to pay its pro rata of the cost of construction, operation, and maintenance of said lines as it and the city may agree, and the Secretary will, when notified by the city that arrangements to that effect have been concluded by the city and municipality, cause delivery of energy at transmission voltage to be made accordingly. In the event that an operator of main transmission lines other than the city transmits the energy allocated to the municipality pursuant to Exhibit A, article 25 (*b*), the obligation of the municipality under this paragraph shall apply for the benefit of such other operator as though it has been named herein instead of the city. In any event, disputes and disagreements between the municipality and the operator of main transmission lines shall be determined in accordance with article 22 (*a*) hereof. Nothing herein contained, however, shall relieve the municipality of the obligation to pay the United States for energy contracted for by it whether transmitted or not.

DURATION OF CONTRACT

(21) This contract shall not become effective for any purpose unless on or before November 16, 1931, two-thirds of the qualified electors of the municipality voting at an election to be held for that purpose, have assented that the municipality shall incur the indebtedness and liability of this contract, and make provision for the collection of an annual tax sufficient to pay to the United States each year the minimum annual obligation of the municipality under this contract, or any portion thereof not paid from other sources. After having become effective this contract shall remain in effect until the expiration

of a period of fifty (50) years from the date at which energy is ready for delivery to the city, as announced by the Secretary. The holder of any contract for electrical energy, including the municipality, not in default thereunder, shall be entitled to a renewal thereof upon such terms and conditions as may be authorized or required under the then existing laws and regulations, unless the property of such holder dependent for its usefulness on a continuation of the contract be purchased or acquired and such contractor be compensated for damages to its property, used and useful in the transmission and distribution of such electrical energy and not taken, resulting from the termination of the supply.

DISPUTES AND DISAGREEMENTS

(22) (*a*) Disputes or disagreements arising under this contract between the municipality and any lessee or other allottee shall be arbitrated by three arbitrators, except where otherwise provided in this contract. The municipality shall name one arbitrator, and the other disputant shall name one. These two shall name the third. If either disputant has notified the other that arbitration is demanded and that it has named an arbitrator, and if thereafter the other disputant fails to name an arbitrator for fifteen days, the Secretary, if requested by either disputant shall name such arbitrator, who shall proceed as though named by the disputant. The two arbitrators so named shall meet within five days after appointment of the second and name the third. If they fail to do so, the Secretary will, on request by either disputant or arbitrator, name the third. A decision by any two of the three arbitrators shall be binding on the disputants and enforceable by court proceedings or by the Secretary in his discretion. Arbitration as herein provided, or the failure of the arbitrators to render a decision within six months of appointment of the third arbitrator, shall be a condition precedent to suit by either disputant against the other upon the matter in dispute.

(*b*) Disputes or disagreements between the United States and the municipality as to the interpretation or performance of the provisions of this contract shall be determined either by arbitration or court proceedings, the Secretary of the Interior being authorized to act for the United States in such proceedings. Whenever a controversy arises out of this contract, and the disputants agree to submit the matter to arbitration, the municipality shall name one arbitrator and the Secretary shall name one arbitrator, and the two arbitrators thus chosen shall elect three other arbitrators, but in the event of their failure to name all or any of the three arbitrators within five (5) days after their first meeting, such arbitrators, not so elected, shall be named by the senior judge of the United States Circuit Court of Appeals for the ninth circuit. The decision of any three of such arbitrators shall be a valid and binding award of the arbitrators.

USE OF PUBLIC AND RESERVED LANDS OF THE UNITED STATES

(23) The use is authorized of such public and reserved lands of the United States as may be necessary or convenient for the construction, operation, and maintenance of main transmission lines, to transmit electrical energy generated at Hoover Dam, together with the use of such public and reserved lands of the United States as may be designated by the Secretary, from time to time, for camp sites, residences

for employees, warehouses, and other uses incident to the operation and maintenance of the power plant and incidental works.

PRIORITY OF CLAIMS OF THE UNITED STATES

(24) Claims of the United States arising out of this contract shall have priority over all others, secured or unsecured, and the municipality shall exercise all its powers including the power of taxation, and the powers of assessment, levying and collection of taxes of every kind, which the municipality has or may acquire, for the provision of funds which may become due to the United States under this contract.

TRANSFER OF INTEREST IN CONTRACT

(25) No voluntary transfer of this contract, or of the rights hereunder, shall be made without the written approval of the Secretary; and any successor or assign of the rights of the muncipiality, whether by voluntary transfer, judicial sale, foreclosure sale, or otherwise, shall be subject to all the conditions of the Boulder Canyon project act and also subject to all the provisions and conditions of this contract to the same extent as though such successor or assign were the original contractor hereunder; provided, that a mortgage or trust deed or judicial sales made thereunder shall not be deemed voluntary transfers within the meaning of this article.

RULES AND REGULATIONS

(26) This contract is subject to such rules and regulations conforming to the Boulder Canyon project act as the Secretary may from time to time promulgate; provided, however, that no right of the municipality hereunder shall be impaired or obligation of the municipality hereunder shall be extended thereby; and provided further, that opportunity for hearing shall be afforded the municipality by the Secretary prior to promulgation thereof.

AGREEMENT SUBJECT TO COLORADO RIVER COMPACT

(27) This contract is made upon the express condition and with the express understanding that all rights hereunder shall be subject to and controlled by the Colorado River compact, being the compact or agreement signed at Santa Fe, N. Mex., November 24, 1922, pursuant to act of Congress approved August 19, 1921, entitled "An act to permit a compact or agreement between the States of Arizona, California, Colorado, Nevada, New Mexico, Utah, and Wyoming, respecting the disposition and apportionment of the waters of the Colorado River, and for other purposes," which compact was approved in section 13 (*a*) of the Boulder Canyon project act.

CONTINGENT UPON APPROPRIATIONS

(28) This contract is subject to appropriations being made by Congress from year to year of moneys sufficient to do the work provided for herein, and to there being sufficient moneys available in the Colorado River Dam fund to permit allotments to be made for the performance of such work. No liability shall accrue against the United States, its officers, agents, or employees, by reason of sufficient

moneys not being so appropriated or on account of there not being sufficient moneys in the Colorado River Dam fund to permit of said allotments. This agreement is also subject to the condition that if for any other reason construction of Hoover Dam is not prosecuted to completion with reasonable diligence, then and in such event either party hereto may terminate its obligations hereunder upon one (1) year's written notice to the other party hereto.

TITLE TO REMAIN IN UNITED STATES

(29) As provided by section six (6) of the Boulder Canyon project act, the title to Hoover Dam, reservoir, plant, and incidental works shall forever remain in the United States.

REMEDIES UNDER CONTRACT NOT EXCLUSIVE

(30) Nothing contained in this contract shall be construed as in any manner abridging, limiting, or depriving the United States of any means of enforcing any remedy either at law or in equity for the breach of any of the provisions hereof which it would otherwise have.

MEMBER OF CONGRESS CLAUSE

(31) No Member of or Delegate to Congress or Resident Commissioner shall be adimtted to any share or part of this contract, or to any benefit that may arise therefrom. Nothing, however, herein contained shall be construed to extend to this contract if made with a corporation for its general benefit.

In witness whereof, the parties hereto have caused this contract to be executed the day and year first above written.

Attest:

THE UNITED STATES OF AMERICA,
By RAY LYMAN WILBUR,
Secretary of the Interior.

THE CITY OF BURBANK,
By J. L. NORWOOD,
President of the Council of the City of Burbank.

Approved as to form:
By JAMES H. MITCHELL,
City Attorney.

Attest:
F. S. WEBSTER,
City Clerk of the City of Burbank.

EXHIBIT A

Omitted. Consists of Appendix 2, supra.

[APPENDIX 9]

[NOT A GOVERNMENT CONTRACT]

BOULDER CANYON PROJECT

FORM OF CONTRACT FOR GENERATION AND TRANSMISSION OF POWER

THE CITY OF LOS ANGELES

AND

THE CITY OF PASADENA [GLENDALE] [BURBANK]

CONTRACT FOR GENERATION AND TRANSMISSION OF POWER

Article

CONTRACT FOR GENERATION AND TRANSMISSION OF POWER

(1) This contract, made this twenty-fourth day of September, nineteen hundred thirty-one, between the City of Los Angeles, a municipal corporation, and Department of Water and Power of the City of Los Angeles, acting for this purpose by its board of water and power commissioners, hereinafter styled the city, and the City of ----------, hereinafter styled the municipality.

Witnesseth:

EXPLANATORY RECITALS

(2) Whereas, for the purpose of controlling the floods, improving navigation and regulating the flow of the Colorado River, providing for storage and for the delivery of the stored waters for reclamation of public lands and other beneficial uses exclusively within the United States, and for the generation of electrical energy, the Secretary of the Interior of the United States is authorized to construct, operate, and maintain a dam and incidental works in the main stream of the Colorado River at Black Canyon or Boulder Canyon, adequate to create a storage reservoir of a capacity of not less than twenty-million acre-feet of water; also to construct, equip, operate, and maintain at or near said dam, or cause to be constructed, a complete plant and incidental structures suitable for the fullest economic development of electrical energy from the water discharged from said reservoir; and

(3) Whereas, after full consideration of the advantages of both the Black Canyon and Boulder Canyon Dam sites, the Secretary of the Interior has determined upon Black Canyon as the site of the aforesaid dam, hereinafter styled the Hoover Dam, and has determined that the provision for revenues made by contracts in accordance with the provisions of the Boulder Canyon project act is adequate in his judgment to insure payment of all expenses of operation and maintenance of the Hoover Dam and appurtenant works incurred by the United States, and the repayment within fifty (50) years from the date of completion of said works of all amounts advanced to the Colorado River Dam fund under subdivision (*b*) of section (2) of the Boulder Canyon project act, together with interest thereon made reimbursable under said act; and

(4) Whereas, the United States has entered into an agreement with the city of date April 26, 1930, and supplemental agreements of date May 28, 1930, and September 23, 1931, respectively, for the lease and the operation and maintenance of a Government-built power plant to be constructed at Hoover Dam, together with the right and obligation on the part of the city, except as in said agreement otherwise provided, to act as the generating and transmission agency in the generation and transmission of all energy contracted for by the municipality and other municipalities referred to in said agreement; and

(5) Whereas, in said agreements the Secretary of the Interior reserved the authority to, and in consideration of the execution

thereof was authorized by the city to contract with the municipality for the furnishing of energy to the municipality at transmission voltage, in the amount contracted for by the municipality, and in accordance therewith the Secretary of the Interior has caused to be prepared and to be submitted to said municipality for execution, a contract providing among other things for the purchase of electrical energy to be generated at the power plant to be provided for by the Government, and operated by the city as the generating agency in accordance with the provisions of the agreement and supplemental agreements heretofore referred to in section (4) hereof; and

(6) Whereas, the parties hereto are desirous of entering into this agreement for the generation and transmission of the energy contracted for by the municipality to be generated at said Government-built power plant;

Now, therefore, in consideration of the mutual covenants herein contained, the parties hereto agree as follows, to wit:

(7) *Generation.*—Subject to all of the covenants, terms, and conditions set forth in the agreement dated April 26, 1930, and the supplemental agreements dated May 28, 1930, and September 23, 1931, respectively, hereinbefore referred to in section (4) hereof (copies of which are attached hereto, marked Exhibit A, and by this reference made a part hereof), the city will assume the operation of that portion of the power plant set apart to it under said agreement and supplemental agreements, and will generate the energy contracted for by the municipality in accordance with the provisions of said agreement and supplemental agreements; and the municipality hereby agrees to pay to the United States, in the manner and in accordance with the terms and conditions of said agreement and supplemental agreements for credit of the city, the cost incurred by the city in generating energy for the municipality; and it is agreed that the term "cost" as used with reference to generating energy for the municipality shall include a proper proportionate allowance for amortization of the amounts for which the city is obligated to the United States on account of the use of machinery and equipment, together with a proper proportionate share of the interest on said amounts which the city is obligated to pay the United States, and interest on the city's prepayments of portions thereof, if any, it being understood that said proper proportionate allowance for amortization shall be paid by the municipality in ten (10) equal annual installments in a similar manner and at such dates as the city is obligated to make payments for the same by the terms of its agreement and supplemental agreements with the United States; a proper proportionate part of any annuity set-up in accordance with the regulations of the Secretary of the Interior, and any additional expenditures made by the city with the approval of the Secretary for the purpose of meeting the obligation of the city to make replacements; and a proper proportionate part of the actual outlay of the city for operating such machinery and equipment and keeping the same in repair, including reasonable overhead charges. The extent of the allowance for the several items and the system of accounting therefor shall be prescribed by the Secretary under uniform regulations to be promulgated by him in accordance with the Boulder Canyon project act.

(8) *Transmission.*—The city, pursuant to its agreements hereinbefore referred to, will transmit over its main transmission line

constructed for carrying Boulder Canyon power all energy so contracted for by the municipality, and the municipality will compensate the city therefor on the basis of its reasonable share of the cost of construction, operation, and maintenance of such lines as hereinafter provided.

(9) *Transmission line defined.*—The expression "transmission line" as used herein, shall be understood to mean the main transmission line of the city, consisting of two transmission circuits, constructed to transmit energy from the Hoover Dam to the central receiving station of the city located within the City of Los Angeles, including supporting structures and transmission circuits, the necessary switching stations and equipment, the central receiving station, together with stepdown transformers, synchronous condensers, and other central receiving station equipment, and the necessary stand-by and regulating plant of capacity of not less than one-fourth and not more than one-third the combined reliable operating capacity of such transmission circuits, together with the necessary transmission line capacity connecting between said stand-by and regulating plant and said central receiving station.

(10) *Transmission line construction costs.*—The reasonable share of the construction costs of the transmission line, including interest during construction, which the municipality shall pay to the city shall be determined at the time when energy is available as announced by the Secretary of the Interior, and shall be based on the ratio of the municipality's designated transmission capacity requirement in kilowatts, as specified in the next succeeding section hereof, to the reliable operating capacity of the transmission line in kilowatts.

The determination of the reliable operating capacity of the transmission line, in conjunction with other more detailed matters, shall be based on the following:

1. The known facts respecting the various portions of the transmission line and the generating machinery installed at the Hoover Dam power plant.

2. The determination shall be made through the point by point method, whether by computation or the use of a calculator board, using a factor of eighty per cent (80%) as the relation of the reliable operating capacity to the maximum kilowatts that can be carried immediately prior and subsequent to a short circuit between two line conductors and ground at the most unfavorable location along the line; the duration of the short circuit being 0.2 of a second; the short circuit resulting in separating one section of one circuit through relaying; and the stand-by and regulating plant capacity idling without appreciable load.

3. The determination to be made on the basis of not to exceed five per cent (5%) difference in voltage between the sending and receiving end of the transmission line, including the step-up and step-down transformers, with the receiving voltage being the lower of the two, and the total load supplied from this source of power including a forty per cent (40%) motor load.

4. The assumption that there will be an additional source of power in the form of steam plant capacity in Los Angeles, in addition to the said stand-by and regulating steam plant capacity, carrying a load equal to its rated capacity and equal to twenty-five per cent (25%) of the reliable operating capacity of the transmission line,

and connected with the said central receiving station through 132,000 volt tie lines and reactors.

The municipality's aforesaid reasonable share of the construction costs of the transmission line shall be amortized over a 40-year period through payments in equal monthly installments, including interest on the unpaid balance, from and after the date energy is available as announced by the Secretary of the Interior. Construction costs of the transmission line shall include all moneys and the actual cost to the city of all property used in the construction of said transmission line and appurtenant works which may be properly chargeable under any fixed capital account, including interest during construction and overhead account, in accordance with the uniform system of accounts for electrical corporations prescribed by the Railroad Commission of the State of California; provided, however, that if the actual cost of said property is not readily ascertainable, then the reasonable value of such property shall be deemed to be its actual cost. The city will bill the municipality for each such monthly payment on, before, or about the fifth of the succeeding month, and the same shall become due and payable on the twentieth of such succeeding month. The municipality, however, may, on giving the city six months' notice, pay off the unpaid balance of its reasonable share of the construction costs without any penalty being exacted by the city, except such penalties and additional financial burdens or losses which may accrue to the city by reason of such advance payment. Payments under the foregoing terms and conditions may likewise be made by the municipality of any part of the unpaid balance of its reasonable share of the construction costs; provided, however, that each such payment shall be not less than twenty per cent (20%) of the municipality's total share of said construction costs.

(11) *Transmission capacity requirement of municipality.*—The transmission line capacity required to be provided for the municipality shall be _____ kilowatts at eighty per cent (80%) power factor.

The municipality will be required to install and maintain on its system effective relaying equipment of generally accepted form, adjusted with respect to time and method of procedure in relaying as may be required for relay action in general conformity with the system of relay control of the city, so as to disconnect lines and equipment in emergency and, insofar as may be reasonably practicable, avoid disturbances leading to instability of the general electric system of the city.

During periods of maximum demand the municipality's system power factor at the point of delivery, corrected for line and transfromer modifications between the central receiving station and said point of delivery, shall be maintained at not less than eighty per cent (80%); and during periods of lesser demand, the power factor of the municipality's demand from this source of power supply may be the same as, but not less than, the average power factor of the municality's whole system load; provided, that the reactive kilovolt amperes do not exceed the reactive kilovolt amperes of the municipality's demand during its maximum demand conditions at eighty per cent (80%) power factor; and providing, further, that the municipality shall at all times during the period of this contract use due diligence in conformity with generally accepted practice to maintain the power factor of its electric system as nearly unity as practicable.

(12) *Provision for measuring demand and compensation for overdraft.*—The municipality's maximum demand in kilowatts from this source of power supply shall be determined by measuring the maximum average kilowatt demand occurring in any thirty-minute interval measured at or reduced to the central receiving station of the transmission line. Should the demand in kilowatts taken by the municipality at the point of delivery with correction allowed for losses to the said central receiving station, due to unforeseen operating or emergency condition, exceed the transmission capacity contracted for by the municipality within the convenient ability of said standby and regulating plant to supply such excess demand, then, compensation equal to the extra cost of operating the standby and regulating plant on account of such overdraft shall be made to the city in connection with the next succeeding regular monthly payment by the municipality under this contract; provided that no such overdraft may be allowed in such unforeseen or emergency operating condition unless the municipality in connection with any other source of power required and provided in addition to this source to meet its demands shall have provided corresponding standby and regulating capacity of at least an amount in like proportion as the standby and regulating plant of this source bears to the operating capacity of the transmission line.

(13) *Operation and maintenance costs.*—The reasonable share of the operation and maintenance costs of the transmission line which the municipality shall pay to the city shall be apportioned on the basis of the municipality's designated transmission capacity requirement in the same manner as herein provided for determining the municipality's reasonable share of the construction costs. Payments for operation and maintenance shall be made by the municipality monthly to the city, in the same manner and at the same time as provided for construction cost payments. "Operation and maintenance," as herein used, shall include any and all expenditures made by the city for the purpose of making replacements.

(14) *Replacement.*—"Replacement" as used in this contract is understood to mean the setting aside of funds sufficient to make such replacements as may be necessary to keep the transmission line in good operating condition during and until the end of the said fifty-year period. At the termination of this contract or any continuation or renewal thereof any moneys advanced by the municipality remaining in this replacement fund, including accrued interest thereon, shall be returned to the municipality.

(15) *Overhead.*—The expression "overhead" as used in this contract shall be understood to include general and miscellaneous expenses. Construction, operation and maintenance costs as provided for herein shall include allowance for overhead and general and miscellaneous expenses in accordance with the uniform system of accounts for electrical corporations prescribed by the Railroad Commission of the State of California.

(16) *Interest Rate.*—The interest rate to be paid on the unpaid balance by the municipality to the city shall be the average effective rate of interest paid by the city upon its outstanding bonds and/or other interest bearing indebtedness that necessarily shall be incurred in connection with the financing of the transmission line and its appurtenant works, not, however, exceeding six per cent (6%) per annum.

(17) *Credit for providing stand-by and regulating plant capacity.*—Credit, equal to the corresponding portion of the charge for construction, operation, and maintenance costs of stand-by and regulating plant capacity and the necessary transmission capacity connecting between said stand-by and regulating plant and said central receiving station, shall be given to the municipality in so far as it may provide a part or the whole of its allotment of stand-by and regulating plant capacity; provided, however, that the municipality shall give fifteen (15) months' notice of its intention so to provide a specified part of its portion of stand-by and regulating plant; and, provided, further, that the stand-by and regulating plant capacity so provided and operated by the municipality for which credit shall be given, may be and is operated successfully in conjunction with the standby and regulating plant of the city.

(18) *Accounts and audits.*—(*a*) The city shall keep separate and distinct books of account for all matters covered by this contract as to construction, operation, and maintenance costs, including overhead and general and miscellaneous expenses, in accordance with the uniform system of accounts for electrical corporations prescribed by the Railroad Commission of the State of California, except as said rules and regulations may be modified by mutual consent of the parties hereto.

(*b*) The city will select a firm of certified public accountants who shall establish the accounting procedure in accordance with the uniform system of accounts for electrical corporations prescribed by the Railroad Commission of the State of California. Said books of account shall be audited every six (6) months by a firm of certified public accountants to be selected annually by the city, subject to the approval of the municipality.

(19) *Temporary agreement for municipality's power.*—Should the municipality not be able to utilize a portion of the electrical energy contracted for by it, the city will take such portion of electrical energy so contracted for but not used by the municipality for a period of time not exceeding three years following the announcement by the Secretary that energy is available, as provided in article (11) (*a*) of the contract between the United States and the municipality and compensate the municipality therefor by a credit on the monthly payments due the city from the municipality under the provisions of this contract, equal to the cost of the same to the municipality for falling water and for operation and maintenance expenses of generation at the power plant, together with allowance for amortization of the cost of machinery on a fifty-year basis and with proper allowance for losses in transmission. The municipality may take and use said portion of said electrical energy so contracted for but not used by it at any time. The municipality, without cost to the city and without affecting the municipality's obligations herein, will permit the city to use the municipality's portion of the transmission line capacity during the aforesaid period when the city is taking and using the municipality's energy in accordance with the provisions of this paragraph.

(20) *Option to renew.*—The municipality shall have the option of continuing its right to have the energy covered by its contract with the United States generated by the city and transmitted by it over the transmission line after termination of this contract during the period of time, if any, the city may continue to operate and maintain the necessary generating machinery at the power plant and the transmission

line on a basis of the municipality paying its proportionate share of costs of operation, maintenance and replacements of the generating machinery and of the transmission line on terms and conditions consistent with the then existing laws and the provisions of this contract. If, during the period of this contract, any substitution is made by the city for the transmission line the municipality shall likewise have the option to have its aforesaid energy transmitted by said substituted method on a basis of the municipality, in addition to discharging all its obligations hereunder including payment of the unpaid balance of its share of the construction costs of the original transmission line, if any, less its proportionate share of credit from salvaging said original transmission line or any part thereof, paying its proportionate share of the costs of said substituted equipment, together with its proportionate share of costs of operation, maintenance and replacement on terms and conditions that are consistent with the then existing laws and the provisions of this contract.

(21) *Failure of delivery of municipality's energy at central receiving points.*—In case of failure to provide for the transmission and delivery at a receiving station within Los Angeles of the electric energy contracted for with the United States by the municipality for a period of time immediately following announcement by the Secretary that energy is available, the city will, during such period of time prior to the delivery of such energy, pay the municipality each month an amount equal to the amount due from the municipality to the United States under said contract.

(22) *Transmission from central receiving station.*—The city, at the option of the municipality, will deliver said electrical energy contracted for by the municipality from said central receiving station over its local high-voltage transmission and distribution system to an agreed location on the city's system adjacent to the municipality.

In the event said use of the local transmission and distribution system of the city shall be made, payments for compensation to the city for the use of such portion of the total rated capacity of said system as is required by said municipality shall be based on a charge per kilowatt-hour covering the city's construction, operation, and maintenance costs for said proportionate part, and shall be made monthly by the municipality to the city in the same manner and at the same time as provided for in this contract for other payments to the city.

(23) *Measurement of energy.*—All energy shall be measured at the central receiving station as delivered to the low-tension bus bars by means of suitable metering equipment provided and installed by the city for this purpose. Suitable correction shall be made in the amount of energy so measured on the low-tension bus bars to cover transmission line and transformer losses in determining the amount of energy delivered at transmission voltage as provided for in the agreement and supplemental agreements between the city and the United States referred to in section (4) hereof. The municipality shall share in the expense of maintaining and testing said meter equipment in the same proportion as herein provided for determining the municipality's reasonable share of the construction, operation, and maintenance costs of the transmission line.

The city will install, at the municipality's expense, suitable metering equipment for the purpose of measuring the energy delivered to the municipality from the city at its agreed delivery point. Suitable

correction shall be made in the amounts of energy and its power factor so measured at this delivery point to cover transmission and, in case of transformation, transformer losses, in determining the amounts of energy delivered to the municipality and the power factor of such delivery at the low-tension bus bars of the central receiving station. The said metering equipment shall be maintained and tested by the city at the expense of the municipality.

Meters shall be tested at any reasonable time upon request by either the city or municipality, and in any event they shall be tested at least once each year. If the test discloses that the error of any meter exceeds one per cent (1%), such meter shall be adjusted so that the error shall not exceed one-half of one per cent (½%). The metering equipment shall be tested by means of suitable testing equipment which shall be provided by the city and which shall be calibrated by the city as often as requested by any party hereto by checking against secondary standards of the United States Bureau of Standards maintained by the city in its testing laboratory. Meters shall be kept sealed and the seals shall be broken only in the presence of the respective representatives of both the city and the municipality, and likewise all tests of meter equipment shall be conducted only when representatives of both the city and the municipality are present.

Payments for all obligations of the municipality accruing under the provisions of this paragraph shall be due and payable on the twentieth of the month succeeding the installation of equipment or the performance of the service provided for herein.

(24) *Penalties.*—If any charge or payments provided for herein are not paid by the municipality when due, and at the times and in the manner provided for herein, a penalty of one per cent (1%) of the amount unpaid shall be added thereto, and thereafter an additional penalty of one per cent (1%) of the amount unpaid shall be added on the twenty-first day of each calendar month thereafter during such delinquency.

(25) *Disputes and disagreements.*—Disputes or disagreements arising under this contract between the municipality and the city shall be arbitrated by three arbitrators, except where otherwise provided in this contract. The municipality shall name one arbitrator, and the city shall name one. These two shall name the third. If either disputant has notified the other that arbitration is demanded and that it has named an arbitrator, and if thereafter the other disputant fails to name an arbitrator for fifteen days, the Secretary of the Interior, if requested by either disputant, shall name such arbitrator, who shall proceed as though named by the disputant. The two arbitrators so named shall meet within five days after appointment of the second, and name the third. If they fail to do so, the Secretary will, on request by either disputant or arbitrator, name the third. A decision by any two of the three arbitrators shall be binding on the disputants and enforceable by court proceedings in accordance with the provisions of the then existing law or by the Secretary in his discretion. Arbitration as herein provided, or the failure of the arbitrators to render a decision within six months of appointment of the third arbitrator, shall be a condition precedent to suit by either disputant against the other upon the matter in dispute.

(26) *Transfer of interest in contract.*—No voluntary transfer of this contract, or of the rights hereunder, shall be made without the

written approval of the city acting through its board of water and power commissioners. Any successor or assign of the rights of either of the parties hereto, whether by voluntary transfer, judicial sale, foreclosure sale, or otherwise, shall be subject to all the conditions of the Boulder Canyon project act, and also subject to all the provisions and conditions of this contract to the same extent as though such successor or assign were the original contractor hereunder; provided, that a mortgage or trust deed or judicial sale made thereunder shall not be deemed voluntary transfers within the meaning of this section.

(27) *Title to remain in city.*—It is agreed that nothing herein contained shall be construed as conferring upon the municipality any control of or title in or to said transmission line, as defined herein, appurtenances or incidental works, or any portion thereof, and it is mutually understood that the title to, together with full and complete control of, said transmission line and all appurtenances, incidental works and plants shall forever remain in the city or its nominee or assignee of the same, or any portions thereof. All payments made or to be made by the municipality pursuant to the provisions of this contract shall be construed as constituting consideration for the right to the service to be rendered in generating and transmitting energy by the city in accordance with the provisions hereof.

(28) *Duration of contract.*—This contract shall not become effective for any purpose unless on or before November 16, 1931, two-thirds of the qualified electors of the municipality, voting at an election to be held for that purpose, shall have assented that the municipality shall incur the indebtedness and liability provided for herein and shall have ratified the execution hereof. After having become effective this contract shall remain in effect until the expiration of a period of fifty (50) years from the date at which energy is ready for delivery to the city, as announced by the Secretary.

In witness whereof, the parties hereto have caused this contract to be executed the day and year first above written.

THE CITY OF LOS ANGELES, acting by and through its Board of Water and Power Commissioners,

By ——— ———, *President.*

Attest:

——— ———, *Secretary.*

DEPARTMENT OF WATER AND POWER OF THE CITY OF LOS ANGELES, by the Board of Water and Power Commissioners,

By ——— ———, *President.*

Attest:

——— ———

THE CITY OF ———,

By ——— ———

Attest:

——— ———

——— ———

EXHIBIT A

Contract for lease of power privilege of date April 26, 1930, supplemental agreements of date of May 28, 1930, and September 23, 1931, respectively, between the United States and the City of Los Angeles and Southern California Edison Co. (Ltd.). [Omitted; see Appendix 2 and footnotes.]

II. THE HOOVER DAM WATER CONTRACTS

California

10. Regulations for delivery of water.
    Issued April 23, 1930.
    Amended September 28, 1931.
11. Contract for delivery of water, United States and Metropolitan Water District of Southern California.
    Executed April 24, 1930.
    Amended September 28, 1931.
12. Contract for cooperative construction of Parker Dam, United States and Metropolitan Water District of Southern California.
    Dated February 10, 1933.
13. Contract for repayment of cost of All-American Canal, United States and Imperial Irrigation District.
    Dated December 1, 1932.
14. Proposed contract for delivery of water—United States and City of San Diego.
    Approved as to form by the Secretary January 28, 1933.
15. Proposed contract for delivery of water—United States and Palo Verde Irrigation District.
    Approved as to form by the Secretary January 28, 1933.

Arizona

16. Regulations for delivery of water.
    Issued February 7, 1933.

[APPENDIX 10]

BOULDER CANYON PROJECT

GENERAL REGULATIONS
CONTRACTS FOR THE STORAGE OF WATER IN BOULDER CANYON (HOOVER DAM) AND THE DELIVERY THEREOF IN CALIFORNIA

WASHINGTON, D. C.

April 23, 1930
Amended September 28, 1931

GENERAL REGULATIONS

CONTRACTS FOR THE STORAGE OF WATER IN BOULDER CANYON RESERVOIR, BOULDER CANYON PROJECT, AND THE DELIVERY THEREOF

1. No person shall have or be entitled to have the use for any purpose of the water stored in Boulder Canyon Reservoir except by contract made in pursuance of these regulations. All contracts for delivery of water shall be subject to all the terms and provisions of the Colorado River compact and of the Boulder Canyon project act.

2. The right is reserved to amend or extend these regulations from time to time consistently with said compact and the laws of Congress, as the public need may require.

3. Storage water in Boulder Canyon Reservoir will be delivered upon such terms and conditions as the Secretary may fix from time to time by regulations and contracts thereunder. Water so contracted for may be delivered at such points on the river as may be agreed upon for irrigation and domestic uses.

4. Contracts respecting water for irrigation and domestic uses shall be for permanent service, and shall conform to paragraph *a* of section 4 of the Boulder Canyon project act.

5. No charge shall be made for water or for the use, storage, or delivery of water for irrigation or for water for portable purposes in the Imperial and Coachella Valleys. Charges otherwise shall be fixed by regulation from time to time. Where water is permitted by the Secretary to be taken from the Colorado River from the reservoir above the Hoover Dam, the utilization of the power plant will be impaired to that extent, and the right is reserved to make a higher charge for water taken above the dam than if delivery is made below the dam.

6. Subject to the provisions of article 7 of these regulations, deliveries of water to users in California shall be in accordance with the following recommendation of the State division of water resources:

"The waters of the Colorado River available for use within the State of California under the Colorado River compact and the Boulder Canyon project act shall be apportioned to the respective interests below named and in amounts and with priorities therein named and set forth, as follows:

"SECTION 1. A first priority to Palo Verde Irrigation District for beneficial use exclusively upon lands in said district as it now exists and upon lands between said district and the Colorado River, aggregating (within and without said district) a gross area of 104,500 acres, such waters as may be required by said lands.

"SEC. 2. A second priority to Yuma project of United States Bureau of Reclamation for beneficial use upon not exceeding a gross area of 25,000 acres of land located in said project in California, such waters as may be required by said lands.

"SEC. 3. A third priority (*a*) to Imperial Irrigation District and other lands under or that will be served from the All-American Canal in Imperial and Coachella Valleys, and (*b*) to Palo Verde Irrigation District for use exclusively on 16,000 acres in that area known as the

Lower Palo Verde Mesa, adjacent to Palo Verde Irrigation District, for beneficial consumptive use, 3,850,000 acre-feet of water per annum less the beneficial consumptive use under the priorities designated in sections 1 and 2 above. The rights designated (*a*) and (*b*) in this section are equal in priority. The total beneficial consumptive use under priorities stated in sections 1, 2, and 3 of this article shall not exceed 3,850,000 acre-feet of water per annum.

"SEC. 4. A fourth priority to the Metropolitan Water District of Southern California and/or the City of Los Angeles, for beneficial consumptive use, by themselves and/or others, on the coastal plain of Southern California, 550,000 acre-feet of water per annum.

"SEC. 5. A fifth priority (*a*) to the Metropolitan Water District of Southern California, and/or the City of Los Angeles, for beneficial consumptive use, by themselves and/or others, on the coastal plain of Southern California, 550,000 acre-feet of water per annum and (*b*) to the City of San Diego and/or County of San Diego, for beneficial consumptive use, 112,000 acre-feet of water per annum. The rights designated (*a*) and (*b*) in this section are equal in priority.

"SEC. 6. A sixth priority (*a*) to Imperial Irrigation District and other lands under or that will be served from the All-American Canal in Imperial and Coachella Valleys, and (*b*) to Palo Verde Irrigation District for use exclusively on 16,000 acres in that area known as the Lower Palo Verde Mesa, adjacent to Palo Verde Irrigation District, for beneficial consumptive use, 300,000 acre-feet of water per annum. The rights designated (*a*) and (*b*) in this section are equal in priority.

"SEC. 7. A seventh priority of all remaining water available for use within California, for agricultural use in the Colorado River Basin in California, as said basin is designated on map No. 23000 of the Department of the Interior, Bureau of Reclamation.

"SEC. 8. So far as the rights of the allottees named above are concerned, the Metropolitan Water District of Southern California and/or the City of Los Angeles shall have the exclusive right to withdraw and divert into its aqueduct any water in Boulder Canyon Reservoir accumulated to the individual credit of said district and/or said city (not exceeding at any one time 4,750,000 acre-feet in the aggregate) by reason of reduced diversions by said district and/or said city; provided, that accumulations shall be subject to such conditions as to accumulation, retention, release, and withdrawal as the Secretary of the Interior may from time to time prescribe in his discretion, and his determination thereof shall be final; provided further, that the United States of America reserves the right to make similar arrangements with users in other States without distinction in priority, and to determine the correlative relations between said district and/or said city and such users resulting therefrom.

"SEC. 9. In addition, so far as the rights of the allottees named above are concerned, the City of San Diego and/or County of San Diego shall have the exclusive right to withdraw and divert into an aqueduct any water in Boulder Canyon Reservoir accumulated to the individual credit of said city and/or said county (not exceeding at any one time 250,000 acre-feet in the aggregate) by reason of reduced diversions by said city and/or said county; provided, that accumulations shall be subject to such conditions as to accumulation, retention, release and withdrawal as the Secretary of the Interior may from time to time prescribe in his discretion, and his determination thereof shall be final; provided further, that the United States of America reserves

the right to make similar arrangements with users in other States without distinction in priority, and to determine the correlative relations between the said city and/or said county and such users resulting therefrom.

"SEC. 10. In no event shall the amounts allotted in this agreement to the Metropolitan Water District of Southern California and/or the City of Los Angeles be increased on account of inclusions of a supply for both said district and said city, and either or both may use said apportionments as may be agreed by and between said district and said city.

"SEC. 11. In no event shall the amounts allotted in this agreement to the City of San Diego and/or to the County of San Diego be increased on account of inclusion of a supply for both said city and said county, and either or both may use said apportionments as may be agreed by and between said city and said county.

"SEC. 12. The priorities hereinbefore set forth shall be in no wise affected by the relative dates of water contracts executed by the Secretary of the Interior with the various parties."

7. The Secretary reserves the right to contract with any of the allottees above named in accordance with the above stated recommendation, or, in the event that such recommendation as to Palo Verde Irrigation District is superseded by an agreement between all the above allottees or by a final judicial determination, to contract with the Palo Verde Irrigation district in accordance with such agreement or determination; provided, that priorities numbered fourth and fifth in said recommendation shall not thereby be disturbed.

(Sgd.) RAY LYMAN WILBUR,
Secretary of the Interior.

SEPTEMBER 28, 1931.

[APPENDIX 11]

BOULDER CANYON PROJECT

CONTRACT FOR DELIVERY OF WATER

THE UNITED STATES
AND
THE METROPOLITAN WATER DISTRICT
OF SOUTHERN CALIFORNIA

April 24, 1930
Amended September 28, 1931

150912—33——20

CONTRACT FOR DELIVERY OF WATER [1]

(1) This contract, made this 24th day of April, nineteen hundred thirty, pursuant to the act of Congress approved June 17, 1902 (32 Stat. 388), and acts amendatory thereof or supplementary thereto, all of which acts are commonly known and referred to as the reclamation law, and particularly pursuant to the act of Congress approved December 21, 1928 (45 Stat. 1057), designated the Boulder Canyon project act, between the United States of America, hereinafter referred to as the United States, acting for this purpose by Ray Lyman Wilbur, Secretary of the Interior, hereinafter styled the Secretary and the Metropolitan Water District of Southern California, a public corporation, hereinafter styled the district, organized and existing under the laws of the State of California.

Witnesseth:

EXPLANATORY RECITALS

(2) Whereas, for the purpose of controlling the floods, improving navigation, and regulating the flow of the Colorado River, providing for storage and for the delivery of the stored waters for reclamation of public lands and other beneficial uses exclusively within the United States, the Secretary, subject to the terms of the Colorado River compact, is authorized to construct, operate, and maintain a dam and incidental works in the main stream of the Colorado River at Black Canyon or Boulder Canyon adequate to create a storage reservoir of a capacity of not less than twenty million acre-feet of water; and

(3) Whereas, after full consideration of the advantages of both the Black Canyon and Boulder Canyon Dam sites, the Secretary has determined upon Black Canyon as the site of the aforesaid dam, hereinafter styled the Boulder Canyon Dam, creating thereby a reservoir to be hereinafter styled the Boulder Canyon Reservoir and has determined that the revenues provided for by this contract, together with other contracts in accordance with the provisions of the Boulder Canyon project act, are adequate in his judgment to insure payment of all expenses of operation and maintenance of the Boulder Canyon Dam and appurtenant works incurred by the United States, and the repayment within fifty (50) years from the date of completion of said works of all amounts advanced to the Colorado River dam fund under subdivision (*b*) of section 2 of the Boulder Canyon project act, together with interest thereon made reimbursable under said act; and

(4) Whereas, the district is desirous of entering into a contract for the delivery to it of water from Boulder Canyon Reservoir.

(5) Now, therefore, in consideration of the mutual covenants herein contained, the parties hereto agree as follows, to wit:

[1] As amended by supplementary contract of Sept. 28, 1931.

DELIVERY OF WATER BY THE UNITED STATES[2]

(6) The United States shall, from storage available in the reservoir created by Hoover Dam, deliver to the district each year at a point in the Colorado River immediately above the district's point of diversion (at or in the vicinity of the proposed Parker Dam) so much water as may be necessary to supply the district a total quantity, including all other waters diverted by the district from the Colorado River, in the amounts and with priorities in accordance with the recommendation of the chief of the division of water resources of the State of California, as follows (subject to the availability thereof for use in California under the Colorado River compact and the Boulder Canyon project act):

The waters of the Colorado River available for use within the State of California under the Colorado River compact and the Boulder Canyon project act shall be apportioned to the respective interests below named and in amounts and with priorities therein named and set forth, as follows:

SECTION 1. A first priority to Palo Verde Irrigation District for beneficial use exclusively upon lands in said district as it now exists and upon lands between said district and the Colorado River, aggregating (within and without said district) a gross area of 104,500 acres, such waters as may be required by said lands.

SEC. 2. A second priority to Yuma project of United States Bureau of Reclamation for beneficial use upon not exceeding a gross area of 25,000 acres of land located in said project in California, such waters as may be required by said lands.

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[2] Article 6 as amended by supplementary contract of Sept. 28, 1931. The amended article originally read:

DELIVERY OF WATER BY UNITED STATES

(6) The United States shall deliver to the district each year from the Boulder Canyon Reservoir at a point in the Colorado River immediately below Boulder Canyon Dam, or as provided in article 10 hereof, up to but not to exceed one million fifty thousand (1,050,000) acre-feet of water, which shall be delivered continuously as far as reasonable diligence will permit; provided, that such amount is without prejudice to any additional rights which the district may have or acquire in or to the waters of the Colorado River, or to the power of the parties to contract hereafter with reference thereto. The United States shall not be obligated to deliver water to the district when for any reason such delivery would interfere with the use of Boulder Canyon Dam, and reservoir for river regulation, improvement of navigation, flood control, and/or satisfaction of present perfected rights, in or to the waters of the Colorado River, or its tributaries, in pursuance of Article VIII of the Colorado River compact, and this contract is made upon the express condition and with the express covenant that the right of the district to waters of the Colorado River, or its tributaries, is subject to and controlled by the Colorado River compact. The United States preserves the right to discontinue or temporarily reduce the amount of water to be delivered for the purpose of investigation, inspection, maintenance, repairs, replacement or installation of equipment and/or machinery at Boulder Canyon Dam, but so far as feasible the United States will give the district reasonable notice in advance of such temporary discontinuance or reduction. The United States, its officers, agents, and employees shall not be liable for damages when, for any reason whatsoever, suspensions or reductions in delivery of water occur. This contract is for permanent service, but is made subject to the express covenant and condition that in the event water for the district is not taken or diverted by the district hereunder for district purposes within a period of ten (10) years from and after completion of Boulder Canyon Dam as announced by the Secretary, it may in such event, upon the written order of the Secretary, and after hearing become null and void and of no effect.

SEC. 3. A third priority (*a*) to Imperial Irrigation District and other lands under or that will be served from the All-American Canal in Imperial and Coachella Valleys, and (*b*) to Palo Verde Irrigation District for use exclusively on 16,000 acres in that area known as the "Lower Palo Verde Mesa," adjacent to Palo Verde Irrigation District, for beneficial consumptive use, 3,850,000 acre-feet of water per annum less the beneficial consumptive use under the priorities designated in sections 1 and 2 above. The rights designated (*a*) and (*b*) in this section are equal in priority. The total beneficial consumptive use under priorities stated in sections 1, 2, and 3 of this article shall not exceed 3,850,000 acre-feet of water per annum.

SEC. 4. A fourth priority to the Metropolitan Water District of Southern California and/or the City of Los Angeles, for beneficial consumptive use, by themselves and/or others, on the coastal plain of Southern California, 550,000 acre-feet of water per annum.

SEC. 5. A fifth priority (*a*) to the Metropolitan Water District of Southern California and/or the City of Los Angeles, for beneficial consumptive use, by themselves and/or others, on the coastal plain of Southern California, 550,000 acre-feet of water per annum and (*b*) to the City of San Diego and/or County of San Diego, for beneficial consumptive use, 112,000 acre-feet of water per annum. The rights designated (*a*) and (*b*) in this section are equal in priority.

SEC. 6. A sixth priority (*a*) to Imperial Irrigation District and other lands under or that will be served from the All-American Canal in Imperial and Coachella Valleys, and (*b*) to Palo Verde Irrigation District for use exclusively on 16,000 acres in that area known as the "Lower Palo Verde Mesa," adjacent to Palo Verde Irrigation District, for beneficial consumptive use, 300,000 acre-feet of water per annum. The rights designated (*a*) and (*b*) in this section are equal in priority.

SEC. 7. A seventh priority of all remaining water available for use within California, for agricultural use in the Colorado River Basin in California, as said basin is designated on map No. 23000 of the Department of the Interior, Bureau of Reclamation.

SEC. 8. So far as the rights of the allottees named above are concerned, the Metropolitan Water District of Southern California and/or the City of Los Angeles shall have the exclusive right to withdraw and divert into its aqueduct any water in Boulder Canyon Reservoir accumulated to the individual credit of said district and/or said city (not exceeding at any one time 4,750,000 acre-feet in the aggregate) by reason of reduced diversions by said district and/or said city; provided, that accumulations shall be subject to such conditions as to accumulation, retention, release, and withdrawal as the Secretary of the Interior may from time to time prescribe in his discretion, and his determination thereof shall be final; provided further, that the United States of America reserves the right to make similar arrangements with users in other States without distinction in priority, and to determine the correlative relations between said district and/or said city and such users resulting therefrom.

SEC. 9. In addition, so far as the rights of the allottees named above are concerned, the City of San Diego and/or County of San Diego shall have the exclusive right to withdraw and divert into an aqueduct any water in Boulder Canyon Reservoir accumulated to the individual credit of said city and/or said county (not exceeding at any one time 250,000 acre-feet in the aggregate) by reason of reduced

diversions by said city and/or said county; provided, that accumulations shall be subject to such conditions as to accumulation, retention, release, and withdrawal as the Secretary of the Interior may from time to time prescribe in his discretion, and his determination thereof shall be final; provided further, that the United States of America reserves the right to make similar arrangements with users in other States without distinction in priority, and to determine the correlative relations between the said city and/or said county and such users resulting therefrom.

SEC. 10. In no event shall the amounts allotted in this agreement to the Metropolitan Water District of Southern California and/or the City of Los Angeles be increased on account of inclusion of a supply for both said district and said city, and either or both may use said apportionments as may be agreed by and between said district and said city.

SEC. 11. In no event shall the amounts allotted in this agreement to the City of San Diego and/or to the County of San Diego be increased on account of inclusion of a supply for both said city and said county, and either or both may use said apportionments as may be agreed by and between said city and said county.

SEC. 12. The priorities hereinbefore set forth shall be in no wise affected by the relative dates of water contracts executed by the Secretary of the Interior with the various parties.

The Secretary reserves the right to, and the district agrees that he may, contract with any of the allottees above named in accordance with the above-stated recommendation, or in the event that such recommendation as to Palo Verde Irrigation District is superseded by an agreement between all the above allottees or by a final judicial determination, to contract with the Palo Verde Irrigation District in accordance with such agreement or determination; provided, that priorities numbered fourth and fifth shall not thereby be disturbed.

Said water shall be delivered continuously as far as reasonable diligence will permit, but the United States shall not be obligated to deliver water to the district when for any reason such delivery would interfere with the use of Hoover Dam and Boulder Canyon Reservoir for river regulation, improvement of navigation, flood control, and/or satisfaction of perfected rights, in or to the waters of the Colorado River, or its tributaries, in pursuance of Article VIII of the Colorado River compact, and this contract is made upon the express condition and with the express covenant that the right of the district to waters of the Colorado River or its tributaries is subject to and controlled by the Colorado River compact. The United States reserves the right to discontinue or temporarily reduce the amount of water to be delivered for the purpose of investigation, inspection, maintenance, repairs, replacement, or installation of equipment and/or machinery at Hoover Dam, but so far as feasible the United States will give the district reasonable notice in advance of such temporary discontinuance or reduction, the United States, its officers, agents, and employees shall not be liable for damages when, for any reason whatsoever, suspensions or reductions in delivery of water occur. This contract is for permanent service, but is made subject to the express covenant and condition that in the event water for the district is not taken or diverted by the district hereunder for district purposes within a period of ten (10) years from and after completion of Hoover Dam as announced by the Secretary, it may in such event upon the

written order of the Secretary and after hearing become null and void and of no effect.

RECEIPT OF WATER BY DISTRICT

(7) The district shall receive the water to be delivered to it by the United States under the terms hereof at the point of delivery above stated and shall at its own expense convey such water to its proposed aqueduct, and shall perform all acts required by law or custom in order to maintain its control over such water and to secure and maintain its lawful and proper diversion from the Colorado River.

MEASUREMENT OF WATER

(8) The water to be delivered hereunder shall be measured at the intake of the district's proposed aqueduct by such measuring and controlling devices or such automatic gages or both as shall be satisfactory to the Secretary. Said measuring and controlling devices, or automatic gages, shall be furnished, installed, and maintained by and at the expense of the district, but they shall be and remain at all times under the complete control of the United States, whose authorized representatives may at all times have access to them over the lands and rights of way of the district.

RECORD OF WATER DIVERTED

(9) The district shall make full and complete written monthly reports as directed by the Secretary on forms to be supplied by the United States of all water diverted from the Colorado River. Such reports shall be made by the fifth day of the month immediately succeeding the month in which the water is diverted, and the records and data from which such reports are made shall be accessible to the United States on demand of the Secretary.

CHARGE FOR DELIVERY OF WATER

(10) A charge of twenty-five cents ($0.25) per acre-foot shall be made for water delivered to the district hereunder during the Boulder Dam cost-repayment period. It is understood by the district that it may divert water above Boulder Canyon Dam, but that such diversion of water above the dam will reduce the amount of power otherwise available at said dam, and may reduce the amount which would have been utilized, except at times when the reservoir is spilling, and an additional charge, determined as stated below, will be made on account of any such reduction in energy which would otherwise have been utilized in case water is diverted above the dam. The energy which could have been generated by the water diverted above the dam and which would have been utilized at times when the reservoir is not spilling will be calculated from the effective head, the quantity of water diverted, and the over-all efficiency of the power plant, as determined by the Secretary, whose determination shall be conclusive and binding upon the parties hereto. The additional charge per month for diversion above the dam will be the product of such amount of energy and the rate per kilowatt-hour for firm energy at Boulder Canyon Dam in effect at the time of such diversion. Nevertheless, if such diversion during any year (June 1 to May 31, inclusive) has not

reduced the amount of firm energy during such year for which the United States has contracted, the diversion, to the extent that no reduction in firm energy has been occasioned, shall be computed at the rate for secondary energy then in force and credit given on the ensuing year's power bills of the district for the difference between the amount charged therefor and the amount so determined. The Secretary's determination of such credit shall be conclusive. The reservoir shall be considered as spilling whenever water is being discharged in excess of the amount used for the generation of power, whether such waste occurs over the spillway or otherwise. Energy equivalent to water delivered above the dam, determined as above, for which the firm energy rate is charged, shall be included in the total firm energy available at the dam, defined as four billion three hundred thirty million (4,330,000,000) kilowatt-hours per year (June 1 to May 31, inclusive), upon completion of the dam, as announced by the Secretary, and decreasing uniformly thereafter by eight million seven hundred sixty thousand (8,760,000) kilowatt-hours per year, and also included in the district's allotment of firm energy. Nevertheless, if it be determined by the Secretary that the rate of decrease above stated is not in accord with actual conditions, the Secretary reserves the right to fix a lesser rate for any year (June 1 to May 31, inclusive) in advance.

MONTHLY PAYMENTS AND PENALTIES

(11) The district shall pay monthly for all water delivered to it hereunder, or diverted by it from the Colorado River, in accordance with the rate herein in article ten (10) established. Payments shall be due on the first of the second month immediately succeeding the month in which water is delivered and/or diverted. If such charges are not paid when due, a penalty of one per centum (1%) of the amount unpaid shall be added thereto, and thereafter an additional penalty of one per centum (1%) of the amount unpaid shall be added on the first day of each calendar month during such delinquency.

REFUSAL OF WATER IN CASE OF DEFAULT

(12) The United States reserves the right to refuse to deliver water to the district in the event of default for a period of more than twelve (12) months in any payment due or to become due the United States under this contract.

INSPECTION BY THE UNITED STATES

(13) The Secretary or his representatives shall at all times have the right of ingress to and egress from all works of the district for the purpose of inspection, repairs, and maintenance of works of the United States, and for all other proper purposes. The Secretary or his representatives shall also have free access at all reasonable times to the books and records of the district relating to the diversion and distribution of water delivered to it hereunder with the right at any time during office hours to make copies of or from the same.

DISPUTES OR DISAGREEMENTS

(14) Disputes or disagreements as to the interpretation or performance of the provisions of this contract shall be determined either by arbitration or court proceedings, the Secretary of the Interior being authorized to act for the United States in such proceedings. Whenever a controversy arises out of this contract, and the parties hereto agree to submit the matter to arbitration, the district shall name one arbitrator and the Secretary shall name one arbitrator, and the two arbitrators thus chosen shall elect three other arbitrators, but in the event of their failure to name all or any of the three arbitrators within five (5) days after their first meeting, such arbitrators, not so elected, shall be named by the senior judge of the United States Circuit Court of Appeals for the ninth circuit. The decision of any three of such arbitrators shall be a valid and binding award of the arbitrators.

RULES AND REGULATIONS

(15) There is reserved to the Secretary the right to prescribe and enforce rules and regulations governing the delivery and diversion of water hereunder. Such rules and regulations may be modified, revised, and/or extended from time to time after notice to the district and opportunity for it to be heard, as may be deemed proper, necessary, or desirable by the Secretary to carry out the true intent and meaning of the law and of this contract, or amendments hereof, or to protect the interests of the United States. The district hereby agrees that in the operation and maintenance of its diversion works and aqueduct, all such rules and regulations will be fully adhered to.

AGREEMENT SUBJECT TO COLORADO RIVER COMPACT

(16) This contract is made upon the express condition and with the express understanding that all rights hereunder shall be subject to and controlled by the Colorado River compact, being the compact or agreement signed at Santa Fe, N. Mex., November 24, 1922, pursuant to act of Congress approved August 19, 1921, entitled "An act to permit a compact or agreement between the States of Arizona, California, Colorado, Nevada, New Mexico, Utah, and Wyoming, respecting the disposition and apportionment of the waters of the Colorado River, and for other purposes," which compact was approved in section 13 (*a*) of the Boulder Canyon project act.

PRIORITY OF CLAIMS OF THE UNITED STATES

(17) Claims of the United States arising out of this contract shall have priority over all others, secured or unsecured.

CONTINGENT UPON APPROPRIATIONS

(18) This contract is subject to appropriations being made by Congress from year to year of moneys sufficient to do the work provided for herein, and to there being sufficient moneys available in the Colorado River Dam fund to permit allotments to be made for the performance of such work. No liability shall accrue against the United States, its officers, agents, or employees, by reason of sufficient moneys not being so appropriated nor on account of there not being sufficient moneys in the Colorado River Dam fund to permit of said

allotments. This agreement is also subject to the condition that if Congress fails to appropriate moneys for the commencement of construction work within five (5) years from and after execution hereof, or if for any other reason construction of Boulder Canyon Dam is not commenced within said time and thereafter prosecuted to completion with reasonable diligence, then and in such event either party hereto may terminate its obligations hereunder upon one (1) year's written notice to the other party hereto.

RIGHTS RESERVED UNDER SECTION 3737 REVISED STATUTES

(19) All rights of action for breach of any of the provisions of this contract are reserved to the United States as provided in section 3737 of the Revised Statutes of the United States.

REMEDIES UNDER CONTRACT NOT EXCLUSIVE

(20) Nothing contained in this contract shall be construed as in any manner abridging, limiting, or depriving the United States of any means of enforcing any remedy either at law or in equity for the breach of any of the provisions hereof which it would otherwise have.

INTEREST IN CONTRACT NOT TRANSFERABLE

(21) No interest in this agreement is transferable, and no sublease shall be made, by the district without the written consent of the Secretary, and any such attempted transfer or sublease shall cause this contract to become subject to annulment at the option of the United States.

MEMBER OF CONGRESS CLAUSE

(22) No Member of or Delegate to Congress or Resident Commissioner shall be admitted to any share or part of this contract, or to any benefit that may arise therefrom. Nothing, however, herein contained shall be construed to extend to this contract if made with a corporation for its general benefit.

In witness whereof, the parties hereto have caused this contract to be executed the day and year first above written. (Executed in quadruplicate original.)

THE UNITED STATES OF AMERICA,
By RAY LYMAN WILBUR,
Secretary of the Interior.

Attest:
NORTHCUTT ELY.

THE METROPOLITAN WATER DISTRICT
OF SOUTHERN CALIFORNIA,
By W. P. WHITSETT,
Chairman of the Board of Directors.

Approved as to form:
W. B. MATHEWS,
General Counsel.

Attest:
S. H. FINLEY,
Secretary of the Board of Directors.

[SEAL.]

[APPENDIX 12]

BOULDER CANYON PROJECT

COOPERATIVE CONTRACT FOR CONSTRUCTION AND OPERATION OF PARKER DAM

BETWEEN
THE UNITED STATES OF AMERICA
AND
THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA
Feb. 10, 1933

COOPERATIVE CONTRACT FOR CONSTRUCTION AND OPERATION OF PARKER DAM

Article

COOPERATIVE CONTRACT FOR CONSTRUCTION AND OPERATION OF PARKER DAM

1. This contract, made this 10th day of February, 1933, pursuant to the act of Congress approved June 17, 1902 (32 Stat. 388), and acts amendatory thereof or supplementary thereto, all of which acts are commonly known and referred to as the reclamation law, and particularly pursuant to the act of Congress approved March 4, 1921 (41 Stat. 1367, 1404), section 25 of the act of Congress approved April 21, 1904 (33 Stat. 189, 224), and the act of Congress approved December 21, 1928 (45 Stat. 1057), designated the Boulder Canyon project act, and the Metropolitan Water District act of the Legislature of the State of California (Stats. 1927, chap. 429), as amended, particularly section 5, subdivision (9) thereof, between the United States of America, hereinafter referred to as the United States, acting for that purpose by Ray Lyman Wilbur, Secretary of the Interior, hereinafter styled the Secretary, and the Metropolitan Water District of Southern California, a public corporation, hereinafter referred to as the district, organized and existing under any by viture of the laws of the State of California.

Witnesseth:

EXPLANATORY RECITALS

2. Whereas, these parties have heretofore on April 24, 1930, and September 28, 1931, entered into two contracts entitled respectively "Contract for Delivery of Water" and "Supplementary Contract for Delivery of Water," which said contracts provide, among other things, for the delivery by the United States to the district each year from the Boulder Canyon Reservoir of quantities of water at a point in the Colorado River immediately above the district's point of diversion (at or in the vicinity of the proposed Parker Dam hereinafter referred to), and have also entered into two contracts (dated April 26, 1930, and May 31, 1930), for the purchase by the district from the United States of certain quantities of electrical energy to be generated at Hoover Dam, for the pumping of said water into and in an aqueduct to be constructed by the district; and

3. Whereas, the said point of delivery and the proposed Parker Dam are approximately ten (10) miles above the boundaries of the Colorado River Indian Reservation as designated by the act of Congress approved March 3, 1865 (13 Stat. 559), and there are now being irrigated, by pumping, approximately 6,000 acres of land within said reservation, and water has been reserved and appropriated pursuant to said act as amended or supplemented and particularly by the act of April 4, 1910 (36 Stat. 273), for additional lands within said reservation susceptible of irrigation from the Colorado River, the reclamation of which will require diversion from the river by construction of a dam, or by pumping or both, and will require drainage of said lands by pumping, for all of which electrical energy is needed; and

4. Whereas, there are also in Arizona, additional public and other lands in the vicinity of said reservation and also in the Gila Valley,

susceptible of irrigation from the Colorado River, but requiring pumping for such purposes, for which electrical energy will be needed, and the United States has now under way an investigation of possible reclamation of such areas as authorized by section fifteen (15) of the said Boulder Canyon project act; and

5. Whereas, the reclamation of said Indian and public and other lands will be rendered more feasible by the availability of stored water and electrical energy at the proposed Parker Dam, and the floods of the tributaries of the Colorado River between Hoover Dam and Parker Dam will be controlled, and navigation improved, by said dam; and

6. Whereas, the Secretary is authorized by said act of April 21, 1904 (33 Stat. 224), to build the proposed Parker Dam for the reclamation of all or any portion of the irrigable lands on the Yuma and Colorado River Indian Reservations in California and Arizona; and such authority has been reserved in the Arizona enabling act (act of June 20, 1910, 36 Stat. 570, 575), and

7. Whereas, the district is engaged in a project involving the construction of an aqueduct for the purpose of diverting and conveying water from the Colorado River to the metropolitan area of Southern California for domestic, municipal and other useful purposes, and as a means of such diversion, desires storage in the main stream of the Colorado River at the site of the proposed Parker Dam, for the purpose, among others, of desilting water, reducing pump lift and developing incidental electrical energy for pumping water into and in said aqueduct and other uses subordinate to the said aqueduct project, and the district desires to utilize the proposed Parker Dam in common with the United States and is willing to pay to the United States the entire capital cost of construction of said dam, as hereinafter set forth, and is further willing that one-half of the power privilege created by said dam shall be reserved to the United States for the purposes of irrigation and drainage of lands in Arizona within the Colorado River Indian Reservation, as now constituted, and the Gila or Gila-Parker project without contribution by the United States to the capital cost of the proposed dam, as hereinafter set forth, and is also willing that the dam be utilized by the United States for the storage and diversion of water for the requirements of Indian, public, and other lands in Arizona; and

8. Whereas, the Secretary is authorized by the act of Congress approved March 4, 1921, to receive moneys from the district as aforesaid and to effect therewith the construction of the proposed works as though said moneys were specifically appropriated for said purposes; and

9. Whereas, funds are not otherwise available for the construction by the United States of said dam and the provision of storage and diversion facilities and of appurtenant works for the irrigation and drainage of said Indian, public, and other lands in Arizona and the cooperative construction of the said dam and works, as herein provided, will be mutually advantageous to the parties hereto, and the cost of said dam and appurtenant works will be materially less if constructed during the period of completion of the Hoover Dam now under construction than would otherwise be the case;

Now, therefore, in consideration of the mutual covenants herein contained, the parties hereto agree as follows, to wit:

CONSTRUCTION BY THE UNITED STATES

10. The United States will, with funds advanced by the District as hereinafter provided, and for the purposes stated in this contract, construct in the main stream of the Colorado River at a point in the vicinity of Parker, Arizona, shown on the map attached hereto and described herein as Exhibit A, a dam, referred to herein as the Parker Dam, creating thereby a storage reservoir having a maximum water surface elevation of approximately four hundred fifty (450) feet above sea level. (U. S. Geological Survey datum.) Upon like conditions the United States will also construct outlet works, pressure tunnels, penstocks, and other appurtenant structures to the extent that such structures may be necessary and/or economically desirable as parts of the original installation, and such facilities for navigation as the Secretary may find necessary. All buildings intended solely for the use of either party hereto shall be constructed at the sole expense of the party for whom such facilities shall be provided. The dam and appurtenant structures shall be so constructed that subsequent installation of diversion or outlet works shall be possible in the most feasible manner for canal connections with lands within the Colorado River Indian Reservation and with public and other lands in Arizona now or hereafter included in projects constructed under the Reclamation Law and supplementary legislation, or otherwise, subject to the consent and approval of the Secretary, and, if either party hereto requires it, so that one-half of the total installed capacity of electrical generating equipment may be located upon the Arizona side of the river and one-half on the California side. Outlet works, pressure tunnels, penstocks, connections for canals and appurtenant structures not required by the district shall be completed under this contract only to the extent necessary to permit their subsequent completion and use without risk of damage to the remainder of the work.

In carrying out the proposed work hereunder and in acquiring supplies, materials, and equipment therefor, the United States may proceed directly under the method commonly referred to as force account, or may proceed by construction contract. In the event that such contract or contracts shall be let with reference to the construction of said dam, or the acquisition of supplies, materials, or equipment therefor, the letting of such contracts shall be governed by the provisions of section 3709, United States Revised Statutes.

FUNDS TO BE PROVIDED BY THE DISTRICT

11. The district will advance to the United States, not to exceed the sum of thirteen million dollars ($13,000,000), or so much thereof as may be (*a*) the cost of preparation of plans and specifications described in article 13 hereof; (*b*) the actual cost of the said dam, including acquisition of lands and rights of way for reservoir and other incidental purposes, outlet works, pressure tunnels, and penstocks, to be constructed hereunder, and of the district's proportionate share as determined by the Secretary, of such power plant buildings and generating, transforming, and high voltage switching equipment as may be installed for the joint use of the United States and the district, and (*c*) required to meet any overhead and general expense incurred by the United States in carrying out this contract.

Said funds will be furnished to the United States by payment from time to time to the Secretary or such fiscal agent as he may designate

in advance of expenditure thereof by the United States. The Secretary will submit estimates of the monthly anticipated expenditures not less than sixty (60) days in advance and the district will then advance the amount not less than thirty (30) days prior to the month in which such funds shall be estimated to be required. If the United States effects such construction by contract, such contract shall recite that the United States shall not be liable for any loss occasioned by the failure of the district to advance funds as herein provided. The district agrees to hold the United States harmless from all claims whatsoever arising from any such failure. If the funds provided by the district are at any time insufficient, the United States will stop work (if proceeding under force account), when the funds so advanced are exhausted, or give notice to the construction contractor to stop work (if proceeding by construction contract), when the funds so provided are about to be exhausted, and will not resume or give notice to resume work until additional and sufficient funds are provided by the district; and, in any event, the United States shall not be obligated by this agreement beyond the expenditure of the amount actually provided by the district, whether the proposed works are completed or not. The failure of the district to provide funds shall not impose any liability on the district other than to hold the United States harmless from the consequences thereof, but the United States may be relieved, at its option, of any obligation under this contract, if such failure continues for twelve (12) successive months, after submission of estimate therefor, by the Secretary's giving the district written notice of the termination of any further obligation of the United States hereunder.

The cost of the proposed works shall embrace all expense of whatever kind, growing out of or resulting from said works, including any overhead and general expense (as conclusively estimated by the Secretary) incurred by the United States in carrying out this contract. Nothing contained in this article is to be construed as obligating the United States to expend or Congress to appropriate money for any share of (*a*) said power plant buildings or (*b*) said generating, transforming and high voltage switching equipment intended for the joint use of the parties hereto.

NO OBLIGATION BY THE UNITED STATES TO PAY FOR WORKS CONSTRUCTED

12. The United States shall not be under any obligation to repay to the district, or otherwise contribute toward, the cost of any works built with funds provided by the district.

PREPARATION OF PLANS AND SPECIFICATIONS

13. The designs and specifications for all construction or other work under this contract (including exploratory and preparatory work) shall be prepared by the United States with the cooperation of and at the cost of the district, and shall be approved in writing by the general manager and chief engineer of the district, or such other officer as the directors thereof may designate, prior to performance thereof or the letting of contracts for such work.

DURATION OF CONTRACT

14. Upon written notice from the district to the Secretary that funds will be available to carry out the work to be constructed hereunder, the United States agrees to submit within thirty (30) days following such notice its first estimate of funds required during the first thirty (30) days of work hereunder and to proceed thereafter with reasonable diligence. It is contemplated that as far as practicable, the proposed works shall be constructed coincidentally with the construction of Hoover Dam and the filling of the reservoir thereby created and that any contract let by the United States for the erection of Parker Dam shall so provide; but neither the United States nor the district shall incur liability to the other through the noncompletion of said works within said period. This contract shall terminate on December 31, 1945, unless prior thereto the district shall have advanced sufficient funds for all works to be constructed by the United States hereunder, and in the event of such termination, all rights of the district under this contract shall cease, and the uncompleted works, together with the rights to the use thereof, shall vest in the United States.

POWER AND OTHER PRIVILEGES

15. I. The interests of both parties require and it is agreed that the water surface of the reservoir to be created by Parker Dam shall be maintained as nearly as possible at a level of 450 feet above sea level (U. S. Geological Survey datum) at the dam.

II. It is agreed that the United States shall have and may exercise the following rights and such incidental authority as may be necessary to make them effective:

(*a*) The right to control all water passing the dam; provided, however, that the water level stated in article 15 (I) hereof shall not be arbitrarily reduced but may be temporarily reduced from time to time to a minimum elevation of 440 feet above sea level, and the water level shall not be reduced below said minimum level except in cases of emergency affecting the safety of the said dam and appurtenant works.

(*b*) The right, without contribution to the cost of the dam built under this contract, to one-half the power privilege created thereby for use in the irrigation and drainage of lands in Arizona within the Colorado River Indian Reservation as now constituted and the Gila or Parker-Gila project, as determined by the Secretary and for other purposes incidental to said Colorado River Indian Reservation and Gila or Parker-Gila project; that is to say, the right to pass through such generating equipment as it may install, one-half the total available flow at the dam at any given time, after deductions for diversions being made above the dam for the district's aqueduct and for the irrigation of (1) the Colorado River Indian Reservation, as now constituted, and (2) public and other lands in Arizona, now or hereafter included in projects constructed under the reclamation law and supplementary legislation, or otherwise, subject to the consent and approval of the Secretary, and the right to so utilize such portion of the balance of the power privilege as aforesaid as may not be used by the district for the time being.

(*c*) The right to connect with such transmission system as the district may construct for the purpose of utilizing any power trans-

mission capacity in excess of the district's requirements, for the transmission of power from Hoover Dam to Parker Dam for general use within the Colorado River Indian Reservation, as now constituted, and Gila or Parker-Gila project, as determined by the Secretary; provided that such excess capacity shall be subject to reasonable operating conditions fixed by the district, and that the United States shall pay to the district the cost of transmission of such power as may be transmitted by use of such excess capacity hereunder;

(*d*) The right to connect with the Parker Dam and/or the reservoir created thereby by means of a canal (including such outlet and diversion features at Parker Dam as may be necessary or advisable) with lands within the Colorado River Indian Reservation, as now constituted, and with public and other lands in Arizona or California, now or hereafter included in projects constructed under the reclamation law and supplementary legislation, or otherwise, subject to the consent and approval of the Secretary, and the right to thereby divert such quantities of water as may be consistent with the Colorado River compact and the Boulder Canyon project act.

III. It is agreed that the district shall have and may exercise the following rights and such incidental authority as may be necessary to make them effective:

(*a*) The right to one-half of the power privilege created by the proposed Parker Dam for the purpose of developing electrical energy for pumping water into and in the said aqueduct and other uses incidental to said aqueduct project in California; that is to say, the right to pass through such generating equipment as it may install, one-half the total available flow at the dam at any given time, after deductions for diversions being made above the dam for the district's aqueduct and for the irrigation of (1) the Colorado River Indian Reservation, as now constituted, and (2) public and other lands in Arizona, now or hereafter included in projects constructed under the reclamation law and supplementary legislation, or otherwise, subject to the consent and approval of the Secretary, and the right to utilize for said purpose such portion of the balance of the power privilege as aforesaid as may not be used by the United States for the time being.

(*b*) The right to divert water from the said Parker Dam and/or the reservoir created thereby, by means of an aqueduct, canal or other appropriate works (including such outlet and diversion features at Parker Dam as may be necessary or advisable) for domestic, municipal and other beneficial use within the area of the district, as now or hereafter constituted, in California, and to thereby divert such quantities of water as may be consistent with the Boulder Canyon project act, the Colorado River compact and the said contracts heretofore entered into between the United States and the district and described and referred to in Article 2 hereof.

INSTALLATION OF MACHINERY

16. Machinery and equipment for generating, transforming, and high voltage switching of energy for the sole use of the district shall be installed, owned and operated by the district at its own expense. The district shall not be liable for the cost of generating or other electrical equipment installed for the sole use of the United States.

OPERATION AND MAINTENANCE OF RESERVOIR, DAM AND OUTLET WORKS

17. The United States will operate and maintain the reservoir, dam and outlet works, to, but not including shut-off valves, and reserves the right to direct the control of all water passing the dam for any and all purposes; provided that contracts now in force between the parties hereto shall not be thereby impaired. So long as the United States shall make no use of the reservoir, the cost of operation and maintenance (which shall include repairs and replacements and a reasonable amount, as determined by the Secretary, for general expenses and overhead, but excluding contingent liabilities and/or damages) shall be paid monthly in advance by the district to the United States within sixty (60) days of submission of estimates therefor. If and when the United States shall use or authorize the use of said reservoir for diversion of water and/or development of power, the annual cost of maintenance and operation of the reservoir and dam (as hereinabove in this paragraph limited and defined) shall be pro-rated upon the basis of the diversions by each party into their respective aqueducts, canals and power plants, and shall be paid in direct proportion to the uses so made by the district and the United States.

OPERATION AND MAINTENANCE OF POWER PLANT AND POWER PLANT BUILDINGS

18. The district will operate and maintain at its own cost all buildings and equipment used solely by it for the generation of electrical energy, from and including shut-off valves. The United States will operate and maintain at its own cost all buildings and equipment used solely by the United States for the generation of electrical energy, subject to the availability of appropriations therefor by Congress, and said operation and maintenance shall be effected by the United States through such agency as the Secretary shall designate.

TITLE

19. Title to the dam and all other structures erected by the United States, whether utilized by it or by the district, or by both, shall remain in the United States.

UNITED STATES TO BE HELD HARMLESS

20. The district agrees to save the United States, its officers, agents, and employees harmless from all claims whatsoever arising out of the construction and maintenance of said dam, and from all claims whatsoever arising out of such operation thereof as may be necessitated by the requirements of the district. The district agrees to pay all damages resulting from the flooding of lands, and, to the extent that lands within the Chimehuevi Indian Reservation are damaged, payment therefor will be made to the United States for the benefit of said Reservation.

ACCESS TO WORK AND TO BOOKS AND RECORDS

21. Accredited officers of the district shall have the right of ingress to and egress from all work done under this contract, both in progress and after completion, and the right at all reasonable hours to examine

and make copies of any books, records, drawings, or specifications thereof; and the United States shall have a like right as to all pertinent books, records, drawings, and specifications of the district. Upon demand and at not less than thirty-day intervals, the United States will furnish to the district detailed statement of all costs and expenditures in connection with and/or chargeable against the proposed Parker Dam project.

EXISTING CONTRACTS BETWEEN THE UNITED STATES AND THE DISTRICT NOT AFFECTED

22. Existing contracts between the United States and the district shall remain in full force and effect and unaltered by the provisions of this agreement.

TRANSFER OF INTEREST IN CONTRACT

23. No voluntary transfer of this contract, or of the rights hereunder, shall be made without the written approval of the Secretary; and any successor or assign of the rights of the district, whether by voluntary transfer, or otherwise, shall be subject to all the conditions of the reclamation law and supplementary legislation, and also subject to all the provisions and conditions of this contract, to the same extent as though such successor or assign were the original contractor hereunder.

RULES AND REGULATIONS

24. This contract is subject to such rules and regulations, conforming to the reclamation law and supplementary legislation and other statutes cited in this contract, as the Secretary may from time to time promulgate; *provided,* however, that no right of the district hereunder shall be impaired or obligation of the district hereunder shall be extended thereby; and *provided further,* that opportunity for hearing shall be afforded the district by the Secretary prior to promulgation or modification of any such rules and regulations.

AGREEMENT SUBJECT TO COLORADO RIVER COMPACT

25. This contract is made upon the express condition and with the express understanding that all rights hereunder shall be subject to and controlled by the Colorado River compact, being the compact or agreement signed at Santa Fe, New Mexico, November 24, 1922, pursuant to the act of Congress approved August 19, 1921 (42 Stat. 171), entitled "An act to permit a compact or agreement between the States of Arizona, California, Colorado, Nevada, New Mexico, Utah, and Wyoming, respecting the disposition and apportionment of the waters of the Colorado River, and for other purposes," which compact was approved in section 13 (*a*) of the Boulder Canyon project act.

DISPUTES AND DISAGREEMENTS

26. Whenever a controversy arises out of this contract, and if the disputants then agree to submit the matter to arbitration, the district shall name one arbitrator and the Secretary shall name one arbitrator, and the two arbitrators thus chosen shall elect three other arbitrators, but in the event of their failure to name all or any of the three arbitrators within five (5) days after their first meeting, such arbitrators not so elected shall be named by the senior judge of the United States