

**Treaty relating to cooperative development of the water resources of the Columbia
River Basin (with Annexes)**

Done 17 January 1961

The Governments of the United States of America and Canada

Recognizing that their peoples have, for many generations, lived together and cooperated with one another in many aspects of their national enterprises for the greater wealth and happiness of their respective nations, and

Recognizing that the Columbia River basin, as a part of the territory of both countries, contains water resources that are capable of contributing greatly to the economic growth and strength and to the general welfare of the two nations, and

Being desirous of achieving the development of those resources in a manner that will make the largest contribution to the economic program of both countries and to the welfare of their peoples of which those resources are capable, and

Recognizing that the greatest benefit to each country can be secured by cooperative measures for hydroelectric power generation and flood control, which will make possible other benefits as well,

Have agreed as follows:

Article I

Interpretation

(1) In the Treaty, the expression

- (a) "average critical period load factor" means the average of the monthly load factors during the critical stream flow period;
- (b) "base system" means the plants, works and facilities listed in the table in Annex B as enlarged from time to time by the installation of additional generating facilities together with any other plants, works or facilities which may be constructed on the main stem of the Columbia River in the United States of America;
- (c) "Canadian storage means" the storage provided by Canada under Article II;
- (d) "critical stream flow period" means the period, beginning with the initial release of stored water from full reservoir conditions and ending with the reservoirs empty, when the water available from reservoir releases plus the natural stream flow is capable of producing the least amount of hydroelectric power in meeting system load requirements;

(e) "consumptive use" means use of water for domestic, municipal, stock-water, irrigation, mining or industrial purposes but does not include use for the generation of hydroelectric power;

(f) "dam" means a structure to impound water, including facilities for controlling the release of the impounded water;

(g) "entity" means an entity designated by either the United States of America or Canada under Article XIV and includes its lawful successor;

(h) "International Joint Commission" means the Commission established under Article VII of the Boundary Waters Treaty, 1909, or any body designated by the United States of America and Canada to succeed to the functions of the Commission under this Treaty;

(i) "maintenance curtailment" means an interruption or curtailment which the entity responsible therefor considers necessary for purposes of repairs, replacements, installations of equipment, performance of other maintenance work, investigations and inspections;

(j) "monthly load factor" means the ratio of the average load for a month to the integrated maximum load over one hour during that month;

(k) "normal full pool elevation" means the elevation to which water is stored in a reservoir by deliberate impoundment every year, subject to the availability of sufficient flow;

(l) "ratification date" means the day on which the instruments of ratification of the Treaty are exchanged;

(m) "storage" means the space in a reservoir which is usable for impounding water for flood control or for regulating stream flows for hydroelectric power generation;

(n) "Treaty" means this Treaty and its Annexes A and B;

(o) "useful life" means the time between the date of commencement of operation of a dam or facility and the date of its permanent retirement from service by reason of obsolescence or wear and tear which occurs notwithstanding good maintenance practices.

(2) The exercise of any power, or the performance of any duty, under the Treaty does not preclude a subsequent exercise or performance of the power or duty.

Article II

Development by Canada

(1) Canada shall provide in the Columbia River basin in Canada 15,500,000 acre-feet of storage usable for improving the flow of the Columbia River.

(2) In order to provide this storage which in the Treaty is referred to as the Canadian storage, Canada shall construct dams:

(a) on the Columbia River near Mica Creek, British Columbia, with approximately 7,000,000 acre-feet of storage;

(b) near the outlet of Arrow Lakes, British Columbia, with approximately 7,100,000 acre-feet of storage; and

(c) on one or more tributaries of the Kootenay River in British Columbia downstream from the Canada-United States of America boundary with storage equivalent in effect to approximately 1,400,000 acre-feet of storage near Duncan Lake, British Columbia.

(3) Canada shall commence construction of the dam as soon as possible after the ratification date.

Article III

Development by the United States of America Respecting Power

(1) The United States of America shall maintain and operate the hydroelectric facilities included in the base system and any additional hydroelectric facilities constructed on the main arm of the Columbia River in the United States of America in a manner that makes the most effective use of the improvement in stream flow resulting from operation of the Canadian storage for hydroelectric power generation in the United States of America power system.

(2) The obligation in paragraph (1) is discharged by reflecting in the determination of downstream power benefits to which Canada is entitled the assumption that the facilities referred to in paragraph (1) were maintained and operated in accordance therewith.

Article IV

Operation by Canada

(1) For the purpose of increasing hydroelectric power generation in the United States of America and Canada, Canada shall operate the Canadian storage in accordance with Annex A and pursuant to hydroelectric operating plans made thereunder. For the purposes of this obligation an operating plan if it is either the first operating plan or in the view of either the United States of America or Canada it departs substantially from the immediately preceding operating plan must, in order to be effective, be confirmed by an exchange of notes between the United States of America and Canada.

(2) For the purpose of flood control until the expiration of sixty years from the ratification date, Canada shall

(a) operate in accordance with Annex A and pursuant to flood control operating plans made thereunder

(i) 80,000 acre-feet of the Canadian storage described in Article II (2) (a),

(ii) 7,100,000 am-feet of the Canadian average described in Article II (2) (b),

(iii) 1,270,000 acre-feet of the Canadian storage described in Article II (2) (c), provided that the Canadian entity may exchange flood control storage under subparagraph (ii) for flood control storage additional to that under subparagraph (i), at the location described in Article II (2) (a), if the entities agree that the exchange would provide the same effectiveness for control of floods on the Columbia River at the Dalles, Oregon;

(b) operate any additional storage in the Columbia River basin in Canada, when called upon by an entity designated by the United States of America for that purpose, within the limits of existing facilities and as the entity requires to meet flood control needs for the duration of the flood period for which the call is made.

(3) For the purpose of flood control after the expiration of sixty years from the ratification date, and for so long as the flows in the Columbia River in Canada continue to contribute to potential flood hazard in the United States of America, Canada shall, when called upon by an entity designated by the United States of America for that purpose, operate within the limits of existing facilities any storage in the Columbia River basin in Canada as the entity requires to meet flood control needs for the duration of the flood period for which the call is made.

(4) The return to Canada for hydroelectric operation and the compensation to Canada for flood control operation shall be as set out in Articles V and VI.

(5) Any water resource development, in addition to the Canadian storage, constructed in Canada after the ratification date shall not be operated in a way that adversely affects the stream flow control in the Columbia River within Canada so as to reduce the flood control and hydroelectric power benefits which the operation of the Canadian storage in accordance with the operating plans in force from time to time would otherwise produce.

(6) As soon as any Canadian storage becomes operable Canada shall commence operation thereof in accordance with this Article and in any event shall commence full operation of the Canadian storage described in Article II (2) (b) and Article II (2) (c) within five years of the ratification date and shall commence full operation of the balance of the Canadian storage within nine years of the ratification date.

Article V

Entitlement to Downstream Power Benefits

(1) Canada is entitled to one half the downstream power benefits determined under Article VII.

(2) The United States of America shall deliver to Canada at a point on the Canada-United States of America boundary near Oliver, British Columbia, or at such other place as the entities may agree upon, the downstream power benefits to which Canada is entitled, less

(a) transmission loss,

(b) the portion of the entitlement disposed of under Article VIII (1), and

(c) the energy component described in Article VIII (4).

(3) The entitlement of Canada to downstream power benefits begins for any portion of Canadian storage upon commencement of its operation in accordance with Annex A and pursuant to a hydroelectric operating plan made thereunder.

Article VI

Payment for Flood Control

(1) For the flood control provided by Canada under Article IV (2) (a) the United States of America shall pay Canada in United States funds:

(a) 1,200,000 dollars upon the commencement of operation of the storage referred to in subparagraph (a) (i) thereof,

(b) 52,100,000 dollars upon the commencement of operation of the storage referred to in subparagraph (a) (ii) thereof, and

(c) 11,100,000 dollars upon the commencement of operation of the storage referred to in subparagraph (a) (iii) thereof.

(2) If full operation of any storage is not commenced within the time specified in Article IV, the amount set forth in paragraph (1) of this Article with respect to that storage shall be reduced as follows:

(a) under paragraph (1) (a), 4,500 dollars for each month beyond the required time,

(b) under paragraph (1) (b), 192,100 dollars for each month beyond the required times, and

(c) under paragraph (1) (c) 40,800 dollars for each month beyond the required time.

(3) For the flood control provided by Canada under Article IV (2) (b) the United States of America shall pay Canada in United States funds in respect only of each of the first four flood periods for which a call is made 1,875,000 dollars and shall deliver to Canada in respect of each and every call made, electric power equal to the hydroelectric power lost by Canada as a result of operating the storage to meet the flood control need for which the call was made, delivery to be made when the loss of hydroelectric power occurs.

(4) For each flood period for which flood control is provided by Canada under Article IV (3) the United States of America shall pay Canada in United States funds:

(a) the operating cost incurred by Canada in providing the flood control, and

(b) compensation for the economic loss to Canada arising directly from Canada foregoing alternative uses of the storage used to provide the flood control.

(5) Canada may elect to receive in electric power, the whole or any portion of the compensation under paragraph (4) (b) representing loss of hydroelectric power to Canada.

Article VII

Determination of Downstream Power Benefits

(1) The downstream power benefits shall be the diffuse in the hydroelectric power capable of being generated in the United States of America with and without the use of Canadian storage, determined in advance, and is referred to in the Treaty as the downstream power benefits.

(2) For the purpose of determining the downstream power benefits:

(a) the principles and procedures set out in Annex B shall be used and followed;

(b) the Canadian storage shall be considered as next added to 13,000,000 acre-feet of the usable storage listed in Column 4 of the table in Annex B;

(c) the hydroelectric facilities included in the base system shall be considered as being operated to make the most effective use for hydroelectric power generation of the improvement in stream flow resulting from operation of the Canadian storage.

(3) The downstream power benefits to which Canada, is entitled shall be delivered as follows:

(a) dependable hydroelectric capacity as scheduled by the Canadian entity, and

(b) average annual usable hydroelectric energy in equal amounts each month, or in accordance with a modification agreed upon under paragraph (4).

(4) Modification of the obligation in paragraph (3) (b) may be agreed upon by the entities.

Article VIII

Disposal of Entitlement to Downstream Power Benefits

(1) With the authorization of the United States of America and Canada evidenced by exchange of notes, portions of the downstream power benefits to which Canada is entitled may be disposed of within the United States of America. The respective general conditions and limits within which

the entities may arrange initial disposals shall be set out in an exchange of notes to be made as soon as possible after the ratification date.

(2) The entities may arrange and carry out exchanges of dependable hydroelectric capacity and average annual usable hydroelectric energy to which Canada is entitled for average annual usable hydroelectric energy and dependable hydroelectric capacity respectively.

(3) Energy to which Canada is entitled may not be used in the United States of America except in accordance with paragraphs (1) and (2).

(4) The bypassing at dams on the main stem of the Columbia River in the United States of Americas of an amount of water which could produce usable energy equal to the energy component of the downstream power benefits to which Canada is entitled but not delivered to Canada under Article V or disposed of in accordance with paragraphs (1) and (2) at the time the energy component was not so delivered or disposed of, is conclusive evidences that such energy component was not used in the United States of America and that the entitlement of Canada to such energy component is satisfied.

Article IX

Variation of Entitlement to Downstream Power Benefits

(1) If the United States of America considers with respect to any hydroelectric power project planned on the main stem of the Columbia River between Priest Rapids Dam and McNary Dam that the increase in entitlement of Canada to downstream power benefits resulting from the operation of the project would produce a result which would not justify the United States of America in incurring the costs of construction and operation of the project, the United States of America and Canada at the request of the United States of America shall consider modification of the increase in entitlement.

(2) An agreement reached for the purposes of this Article shall be evidenced by an exchange of notes.

Article X

East-West Standby Transmission

(1) The United States of America shall provide in accordance with good engineering practice east-west standby transmission service adequate to safeguard the transmission from Oliver, British Columbia, to Vancouver, British Columbia, of the downstream power benefits to which Canada is entitled and to improve system stability of the east-west circuits in British Columbia.

(2) In consideration of the standby transmission service, Canada shall pay the United States of America in Canadian funds the equivalent of 1.50 United States dollars a year for each kilowatt of dependable hydroelectric capacity included in the downstream power benefits to which Canada is entitled.

(3) When a mutually satisfactory electrical coordination arrangement is entered into between the entities and confirmed by exchange of notes between the United States of America and Canada the obligation of Canada in paragraph (2) ceases.

Article XI

Use of Improved Stream Flow

(1) Improvement in stream flow in one country brought about by operation of storage constructed under the Treaty in the other country shall not be used directly or indirectly for hydroelectric power purposes except:

(a) in the case of use within the United States of America with the prior approval of the United States entity, and

(b) in the case of use within Canada with the prior approval of the authority in Canada having jurisdiction.

(2) The approval required by this Article shall not be given except upon such conditions, consistent with the Treaty, as the entity or authority considers appropriate.

Article XII

Kootenai River Development

(1) The United States of America for a period of five years from the ratification date, has the option to commence construction of a dam on the Kootenai River near Libby, Montana, to provide storage to meet flood control and other purposes in the United States of America. The storage reservoir of the dam shall not raise the level of the Kootenai River at the Canada-United States of America boundary above an elevation consistent with a normal full pool elevation at the dam of 2,459 feet, United States Coast and Geodetic Survey datum, 1929 General Adjustment, 1947 International Supplemental Adjustment.

(2) All benefits which occur in either country from the construction and operation of the storage accrue to the country in which the benefits occur.

(3) The United States of America shall exercise its option by written notice to Canada and shall submit with the notice a schedule of construction which shall include provision for commencement of construction, whether by way of railroad relocation work or otherwise, within five years of the ratification date.

(4) If the United States of America exercises its option, Canada in consideration of the benefits accruing to it under paragraph (2) shall prepare and make available for flooding the land in Canada necessary for the storage reservoir of the dam within a period consistent with the construction schedule.

(5) If a variation in the operation of the storage is considered by Canada to be of advantage to it the United States of America shall, upon request, consult with Canada. If the United States of America determines that the variation would not be to its disadvantage it shall vary the operation accordingly.

(6) The operation of the storage by the United States of America shall be consistent with any order of approval which may be in force from time to time relating to the levels of Kootenay Lake made by the International Joint Commission under the Boundary Waters Treaty, 1909.

(7) Any obligation of Canada under this Article ceases if the United States of America, having exercised the option, does not commence construction of the dam in accordance with the construction schedule.

(8) If the United States of America exercises the option it shall commence full operation of the storage within seven years of the date fixed in the construction schedule for commencement of construction.

(9) If Canada considers that any portion of the land referred to in paragraph (4) is no longer needed for the purpose of this Article the United States of America and Canada, at the request of Canada, shall consider modification of the obligation of Canada in paragraph (4).

(10) If the Treaty is terminated before the end of the useful life of the dam Canada shall for the remainder of the useful life of the dam continue to make available for the storage reservoir of the dam any portion of the land made available under paragraph (4) that is not required by Canada for purposes of diversion of the Kootenay River under Article XIII.

Article XIII

Diversions

(1) Except as provided in this Article neither the United States of America nor Canada shall, without the consent of the other evidenced by an exchange of notes, divert for any use, other than a consumptive use, any water from its natural channel in a way that alters the flow of any water as it crosses the Canada-United States of America boundary within the Columbia River basin.

(2) Canada has the right, after the expiration of twenty years from the ratification date, to divert not more than 1,500,000 acre-feet of water a year from the Kootenay River in the vicinity of Canal Flats, British Columbia, to the headwaters of the Columbia River, provided that the diversion does not reduce the flow of the Kootenay River immediately downstream from the point of diversion below the lesser of 200 cubic feet per second or the natural flow.

(3) Canada has the right, exercisable at any time during the period commencing sixty years after the ratification date and expiring one hundred years after the ratification date, to divert to the headwaters of the Columbia River any water which, in its natural channel, would flow in the Kootenay River across the Canada-United States of America boundary, provided that the diversion does not reduce the flow of the Kootenay River at the Canada-United States of

America boundary near Nowgate, British Columbia, below the lesser of 2,500 cubic feet per second or the natural flow.

(4) During the last twenty years of the period within which Canada may exercise the right to divert described in paragraph (3) the limitation on diversion is the lesser of 1,000 cubic feet per second or the natural flow.

(5) Canada has the right:

(a) if the United States of America does not exercise the option in Article XII (1), or

(b) if it is determined that the United States of America, having exercised the option, did not commence construction of the dam referred to in Article XII in accordance therewith or that the United States of America is in breach of the obligation in that Article to commence full operation of the storage, to divert to the headwaters of the Columbia River any water which, in its natural channel, would flow in the Kootenay River across the Canada-United States of America boundary, provided that the diversion does not reduce the flow of the Kootenay River at the Canada-United States of America boundary near Newgate, British Columbia, below the lesser of 1,000 cubic feet per second or the natural flow.

(6) If a variation in the use of the water diverted under paragraph (2) is considered by the United States of America to be of advantage to it Canada shall, upon request, consult with the United States of America. If Canada determines that the variation would not be to its disadvantage it shall vary the use accordingly.

Article XIV

Arrangements for Implementation

(1) The United States of America and Canada shall each, as soon as possible after the ratification date, designate entities and when so designated the entities are empowered and charged with the duty to formulate and carry out the operating arrangements necessary to implement the Treaty. Either the United States of America or Canada may designate one or more entities. If more than one is designated the powers and duties conferred upon the entities by the Treaty will be allocated among them in the designation.

(2) In addition to the powers and duties dealt with specifically elsewhere in the Treaty the powers and duties of the entities include:

(a) coordination of plans and exchange of information relating to facilities to be used in producing and obtaining the benefits contemplated by the Treaty,

(b) calculation of and arrangements for delivery of hydroelectric power to which Canada is entitled for providing flood control,

- (c) calculation of the amounts payable to the United States of America for standby transmission services,
 - (d) consultation on requests for variations made pursuant to Articles XII (5) and XIII (6),
 - (e) the establishment and operation of a hydrometeorological system as required by Annex A,
 - (f) assisting and cooperating with the Permanent Engineering Board in the discharge of its functions,
 - (g) periodic calculation of accounts,
 - (h) preparation of the hydroelectric operating plans and the flood control operating plans for the Canadian storage together with determination of the downstream power benefits to which Canada is entitled,
 - (i) preparation of proposals to implement Article VIII and carrying out any disposal authorized or exchange provided for therein,
 - (j) making appropriate arrangements for delivery to Canada of the downstream power benefits to which Canada is entitled including such matters as load factors for delivery, times and points of delivery, and calculation of transmission loss,
 - (k) preparation and implementation of detailed operating plans that may produce results more advantageous to both countries than those that would arise from operation under the plans referred to in Annexes A and B.
- (3) The entities are authorized to make maintenance curtailments. Except in case of emergency, the entity responsible for a maintenance curtailment shall give notice to the corresponding United States or Canadian entity of the curtailment, including the reason therefor and the probable duration thereof and shall both schedule the curtailment with a view to minimizing its impact and exercise due diligence to resume full operation.
- (4) The United States of America and Canada may by an exchange of notes empower or charge the entities with any other matter coming within the scope of the Treaty.

Article XV

Permanent Engineering Board

- (1) A Permanent Engineering Board is established consisting of four members, two to be appointed by Canada, and two by the United States of America. The initial appointments shall be made within three months of the ratification date.
- (2) The Permanent Engineering Board shall:

(a) assemble records of the flows of the Columbia River and the Kootenay River at the Canada.-
United States of American boundary;

(b) report to the United States of America and Canada whenever there is substantial deviation from the hydroelectric and flood control operating plans and if appropriate include in the report recommendations for remedial action and compensatory adjustments;

(c) assist in reconciling differences concerning technical or operational matters that may arise between the entities;

(d) make periodic inspections and require reports as n from the entities with a view to ensuring that the objectives of the Treaty are being met;

(e) make reports to the United States of America and Canada at least once a year of the results being achieved under the Treaty and make special reports concerning any matter which it considers should be brought to their attention;

(f) investigate and report with respect to any other matter coming within the scope of the Treaty at the request of either the United States of America or Canada.

(3) Reports of the Permanent Engineering Board made in the course of the performance of its functions under this Article shall be prima facie evidence of the facts therein contained and shall be accepted unless rebutted by other evidence.

(4) The Permanent Engineering Board shall comply with directions, relating to its administration and procedures, agreed upon by the United States of America and Canada as evidenced by an exchange of notes.

Article XVI

Settlement of Differences

(1) Differences arising under the Treaty which the United States of America and Canada cannot resolve may be referred by either to the]International Joint Commission for decision.

(2) If the International Joint Commission does not render a decision within three months of the referral or within such other period as may be agreed upon by the United States of America and Canada, either may then submit the difference to arbitration by written notice to the other.

(3) Arbitration shall be by a tribunal composed of a member appointed by Canada, a member appointed by the United States of America and a member appointed jointly by the United States of America and Canada who shall be Chairman. If within six weeks of the delivery of a notice under paragraph (2) either the United States of America or Canada has failed to appoint its member, or they are unable to agree upon the member who is to be Chairman, either the United States of America or Canada may request the President of the International Court of Justice to

appoint the member or members. The decision of a majority of the members of an arbitration tribunal shall be the decision of the tribunal.

(4) The United States of America and Canada shall accept as definitive and binding and shall carry out any decision of the International Joint Commission or an arbitration tribunal.

(5) Provision for the administrative support of a tribunal and for remuneration and expenses of its members shall be as agreed in an exchange of notes between the United States of America and Canada.

(6) The United States of America and Canada may agree by an exchange of notes on alternative procedures for settling differences arising under the Treaty, including reference of any difference to the International Court of Justice for decision.

Article XVII

Restoration of Pre-Treaty Legal Status

(1) Nothing in this Treaty and no action taken or foregone pursuant to its provisions shall be deemed, after its termination or expiration, to have abrogated or modified any of the rights or obligations of the United States of America or Canada under then existing international law, with respect to the uses of the water resources of the Columbia River basin.

(2) Upon termination of this Treaty, the Boundary Waters Treaty, 1909, shall, if it has not been terminated, apply to the Columbia River basin, except insofar as the provisions of that Treaty may be inconsistent with any provision of this Treaty which continues in effect.

(3) Upon termination of this Treaty, if the Boundary Waters Treaty, 1909, has been terminated in accordance with Article XIV of that Treaty, the provisions of Article II of that Treaty shall continue to apply to the waters of the Columbia River basin.

(4) If upon the termination of this Treaty Article II of the Boundary Waters Treaty, 1909, continues in force by virtue of paragraph (3) of this Article the effect of Article II of that Treaty with respect to the Columbia River basin may be terminated by either the United States of America or Canada delivering to the other one year's written notice to that effect; provided however that the notice may be given only after the termination of this Treaty.

(5) If, prior to the termination of this Treaty, Canada undertakes works usable for and relating to a diversion of water from the Columbia River basin, other than works authorized by or undertaken for the purpose of exercising a right under Article XIII or any other provision of this Treaty, paragraph (3) of this Article shall cease to apply one year after delivery by either the United States of America or Canada to the other of written notice to that effect.

Article XVIII

Liability for Damage

(1) The United States of America and Canada shall be liable to the other and shall make appropriate compensation to the other in respect of any act, failure to act, omission or delay amounting to a breach of the Treaty or of any of its provisions other than an act, failure to act, omission or delay occurring by reason of war, strike, major calamity, act of God, uncontrollable force or maintenance curtailment.

(2) Except as provided in paragraph (1) neither the United States of America nor Canada shall be liable to the other or to any person in respect of any injury, damage or loss occurring in the territory of the other caused by any act, failure to act, omission or delay under the Treaty whether the injury, damage or loss results from negligence or otherwise

(3) The United States of America and Canada, each to the extent possible within its territory, shall exercise due diligence to remove the cause of and to mitigate the effect of any injury, damage or loss occurring in the territory of the other as a result of any act failure to act, omission or delay under the Treaty.

(4) Failure to commence operation as required under Articles IV and XII is not a breach of the Treaty and does not result in the loss of rights under the Treaty if the failure results from a delay that is not wilful or reasonably avoidable.

(5) The compensation payable under paragraph (1):

(a) in respect of a breach by Canada of the obligation to commence full operation of a storage shall be forfeiture of entitlement to downstream power benefits resulting from the operation of that storage, after operation commences, for a period equal to the period between the day of commencement of operation and the day when commencement should have occurred;

(b) in respect of any other breach by either the United States of America or Canada, causing loss of power benefits, shall not exceed the actual loss in revenue from the sale of hydroelectric power.

Article XIX

Period of Treaty

(1) The Treaty shall come into force on the ratification date.

(2) Either the United States of America or Canada may terminate the Treaty other than Article XIII (except paragraph (1) thereof), Article XVII and this Article at any time after the Treaty has been in force for sixty years if it has delivered at least ten years written notice to the other of its intention to terminate the Treaty.

(3) If the Treaty is terminated before the end of the useful life of a dam built under Article XII then, notwithstanding termination, Article XII remains in force until the end of the useful life of the dam.

(4) If the Treaty is terminated before the end of the useful life of the facilities providing the storage described in Article IV(3) and if the conditions described therein exist then, notwithstanding termination, Articles IV(3) and VI(4) and (5) remain in force until either the end of the useful life of those facilities or until those conditions cease to exist, whichever is the first to occur.

Article XX

Ratification

The instruments of ratification of the Treaty shall be exchanged by the United States of America and Canada at Ottawa, Canada.

Article XXI

Registration with the United Nations

In conformity with Article 102 of the Charter of the United Nations, the Treaty shall be registered by Canada with the Secretariat of the United Nations.

This Treaty has been done in duplicate copies in the English language.

IN WITNESS WHEREOF the undersigned, duly authorized by their respective Governments, have signed this Treaty at Washington, District of Columbia, United States of America, this 17th day of January, 1961.

FOR THE UNITED STATES OF AMERICA:

Dwight D. Eisenhower
President of the United States of America

Christian A. Herter
Secretary of State

Elmer F. Bennett
Under Secretary of the Interior

FOR CANADA:

John G Diefenbaker
Prime Minister of Canada

E. D. Fulton
Minister of Justice

A. D. P. Heeney

Ambassador Extraordinary and Plenipotentiary of Canada to the United States of America

ANNEX A PRINCIPLES OF OPERATION

General

1. The Canadian storage provided under Article II will be operated in accordance with the procedures described herein.
2. A hydrometeorological system, including snow courses, precipitation stations and stream flow gauges will be established and operated, as mutually agreed by the entities and in consultation with the Permanent Engineering Board, for use in establishing data for detailed programming of flood control and power operations. Hydrometeorological information will be made available to the entities in both countries for immediate and continuing use in flood control and power operations.
3. Sufficient discharge capacity at each dam to afford the desired regulation for power and flood control will be provided through outlet works and turbine installations as mutually agreed by the entities. The discharge capacity provided for flood control operations will be large enough to pass inflow plus sufficient storage releases during the evacuation period to provide the storage space required. The discharge capacity will be evaluated on the basis of full use of any conduits provided for that purpose plus one half the hydraulic capacity of the turbine installation at the time of commencement of the operation of storage under the Treaty.
4. The outflows will be in accordance with storage reservation diagrams and associated criteria established for flood control purposes and with reservoir-balance relationships established for power operations. Unless otherwise agreed by the entities the average weekly outflows shall not be less than 3,000 cubic feet per second at the dam described in Article II (2) (a), not less than 5,000 cubic feet per second at the dam described in Article II (2)(b) and not less than 1,000 cubic feet per second at the dam described in Article II(2)(c). These minimum average weekly releases may be scheduled by the Canadian entity as required for power or other purposes.

Flood Control

5. For flood control operation, the United States entity will submit flood control operating plans which may consist of or include flood control storage reservation diagrams and associated criteria for each of the dams. The Canadian entity will operate in accordance with these diagrams or any variation which the entities agree will not derogate from the desired aim of the flood control plan. The use of these diagrams will be based on data obtained in accordance with paragraph 2. The diagrams will consist of relationships specifying the flood control storage reservations required at indicated times of the year for volumes of forecast runoff. After consultation with the Canadian entity the United States entity may from time to time as conditions warrant adjust these storage reservation diagrams within the general limitations of flood control operation. Evacuation of the storages listed hereunder will be guided by the flood

control storage reservation diagrams and refill will be as requested by the United States entity after consultation with the Canadian entity. The general limitations of flood control operation are as follows:

(a) The Dam described in Article II (2) (a) - The reservoir will be evacuated to provide up to 80,000 acre-feet of storage, if required, for flood control use by May 1 of each year.

(b) The Dam described in Article II (2) (b) - The reservoir will be evacuated to provide up to 7,100,000 acre-feet of storage, if required, for flood control use by May 1 of each year.

(c) The Dam described in Article II (2) (e) - The reservoir will be evacuated to provide up to 700,000 acre-feet of storage, if required, for flood control use by April 1 of each year and up to 1,270,000 acre-feet of storage, if required, for flood control use by May 1 of each year.

(d) The Canadian entity may exchange flood control storage provided in the reservoir referred to in subparagraph (b) for additional storage provided in the reservoir referred to in subparagraph (a) if the entities agree that the exchange would provide the same effectiveness for control of floods on the Columbia River at The Dalles, Oregon.

Power

6. For power generating purposes the 15,500,000 acre feet of Canadian storage will be operated in accordance with operating plans designed to achieve optimum power generation downstream in the United States of America until such time as power generating facilities are installed at the site referred to in paragraph 5(a) or at sites in Canada downstream therefrom.

7. After at-site power is developed at the site referred to in paragraph 5 (a,) or power generating facilities are placed in operation in Canada downstream from that site, the storage operation will be changed so as to be operated in accordance with operating plans designed to achieve optimum power generation at-site in Canada and downstream in the United States of America and Canada, including consideration of any agreed electrical coordination between the two countries. Any reduction in the downstream power benefits in the United States of America resulting from that change in operation of the Canadian storage shall not exceed in any one year the reduction in downstream power benefits in the United States of America which would result from reducing by 500,000 acre-feet the Canadian storage operated to achieve optimum power generation in the United States of America and shall not exceed at any time during the period of the Treaty the reduction in downstream power benefits in the United States of America which would result from similarly reducing the Canadian storage by 3,000,000 acre-feet.

8. After at-site power is developed at the site referred to in paragraph 5(a) or power generating facilities are placed in operation in Canada downstream from that site, storage may be operated to achieve optimum generation of power in the United States of America alone if mutually agreed by the entities in which event the United States of America shall supply power to Canada to offset any reduction in Canadian generation which would be created as a result of such operation as compared to operation to achieve optimum power generation at-site in Canada and downstream in the United States of America and Canada. Similarly, the storage may be operated

to achieve optimum generation of power in Canada alone if mutually agreed by the entities in which event Canada shall supply power to the United States of America to offset any reduction in United States generation which would be created as a result of such operation as compared to operation to achieve optimum power generation at-site in Canada and downstream in the United States of America and Canada.

9. Before the first storage becomes operative, the entities will agree on operating plans and the resulting downstream power benefits for each year until the total of 15,500,000 acre-feet of storage in Canada becomes operative. In addition, commencing five years before the total of 15,500,000 acre-feet of storage is expected to become operative, the entities will agree annually on operating plans and the resulting downstream power benefits for the sixth succeeding year of operation thereafter. This procedure will continue during the life of the Treaty, providing to both the entities, in advance, an assured plan of operation of the Canadian storage and a determination of the resulting downstream power benefits for the next succeeding five years.

ANNEX B DETERMINATION OF DOWNSTREAM POWER BENEFITS

1. The downstream power benefits in the United States of America attributable to operation in accordance with Annex A of the storage provided by Canada under Article II will be determined in advance and will be the estimated increase in dependable hydroelectric capacity in kilowatts for agreed critical stream flow periods and the increase in average annual usable hydroelectric energy output in kilowatt hours on the basis of an agreed period of stream flow record.

2. The dependable hydroelectric capacity to be credited to Canadian storage will be the difference between the average rates of generation in kilowatts during the appropriate critical stream flow periods for the United States of America base system, consisting of the projects listed in the table, with and without the addition of the Canadian storage, divided by the estimated average critical period load factor. The capacity credit shall not exceed the difference between the capability of the base system without Canadian storage and the maximum feasible capability of the base system with Canadian storage, to supply firm load during the critical stream flow periods.

3. The increase in the average annual usable hydroelectric energy will be determined by first computing the difference between the available hydroelectric energy at the United States ham system with and without Canadian storage. The entities will then agree upon the part of available energy which is usable with and without Canadian storage, and the difference thus agreed will be the increase in average annual usable hydroelectric energy. Determination of the part of the energy which is usable will include consideration of existing and scheduled transmission facilities and the exist-once of markets capable of using the energy on a contractual basis similar to the then existing contracts. The part of the available energy which is considered usable shall be the sum of:

(a) the firm energy,

(b) the energy which can be used for thermal power displacement in the Pacific Northwest Area as defined in Paragraph 7, and

(c) the amount of the remaining portion of the available energy which is agreed by the entities to be usable and which shall not exceed in any event 40% of that remainder.

4. An initial determination of the estimated downstream power benefits in the United States of America from Canadian storage added to the United States base system will be made, before any of the Canadian storage becomes operative. This determination will include estimates of the downstream power benefits for each year until the total of 15,500,000 acre-feet of Canadian storage becomes operative.

5. Commencing five years before the total of 15,500,000 acre-feet of storage is expected to become operative, estimates of downstream power benefits will be calculated annually for the sixth succeeding year on the basis of the assured plan of operation for that year.

6. The critical stream flow period and the details of the assured plan of operation will be agreed upon by the entities at each determination. Unless otherwise agreed upon by the entities, the determination of the downstream power benefits shall be based upon flows for the twenty year period beginning with July 1928 as contained in the report entitled Modified Flows at Selected Power Sites-Columbia River Basin, dated June 1957. No reduction in the downstream power benefits will be made at any time during the period of the Treaty. No reduction in the downstream power benefits credited to Canadian storage will be made as a result of the load estimate in the United States of America, for the year for which the dam is made, being less than the load estimate for the preceding year.

7. In computing the increase in dependable hydroelectric capacity and the increase in average annual Hydroelectric, energy, the procedure shall be in accordance with the three steps described below and shall encompass the loads of the Pacific Northwest Area. The Pacific Northwest Area for purposes of these determinations shall be Oregon, Washington, Idaho and Montana west of the Continental Divide but shall exclude areas served on the ratification date by the California Oregon Power Company and Utah Power and Light Company.

Step I

The system for the period covered by the estimate will consist of the Canadian storage, the United States base system, any thermal installation operated in coordination with the base system, and additional hydroelectric projects which will provide storage releases usable by the base system which will provide storage releases that are usable by the base system. The installations included in this system will be those required, with allowance for adequate reserves, to meet the forecast power load to be served by this system in the United States of America, including the estimate flow of power at points of inter-connection with adjacent areas, subject to paragraph 3, plus the portion of the entitlement of Canada that is expected to be used in Canada. The capability of this system to supply this load will be determined on the basis that the system will be operated in accordance with the established operating practices of each of the projects involved.

Step II

A determination of the energy capability will be made using the same thermal installation as in Step I, the United States base system with the same installed capacity as in Step I and Canadian storage.

Step III

A similar determination of the energy capability will be made using the same thermal installation as in Step I and the United States base system with the same installed capacity as in Step I.

8. The downstream power benefits to be credited to Canadian storage will be the differences between the determinations in Step II and Step III in dependable hydroelectric capacity and in average annual usable hydroelectric energy, made in accordance with paragraphs 2 and 3.

WHEREAS the Senate of the United States of America by their resolution of March 16, 1961, two-thirds of the Senators present concurring thereto did advise and consent to the ratification of the aforesaid Treaty;

WHEREAS the aforesaid treaty was duly ratified by the President of the United States of America on March 23, 1961, in pursuance of the aforesaid advice and consent of the Senate, and was duly ratified on the part of Canada;

WHEREAS it is provided in Article XIX of the aforesaid treaty that the treaty shall come into force on the ratification date and in Article XX of the aforesaid treaty that the instruments of ratification shall be exchanged at Ottawa;

AND WHEREAS the respective instruments of ratification of the aforesaid treaty were duly exchanged at Ottawa on September 16, 1964 by the respective Plenipotentiaries of the United States of America and Canada;

Now, THEREFORE, be it known that I, Lyndon B. Johnson, President of the United States of America, do hereby proclaim and make public the aforesaid treaty to the end that the said treaty and each and every article and clause thereof may be observed and fulfilled, on and after September 16, 1964, with good faith by the United States of America and by the citizens of the United States of America and all other persons subject to the jurisdiction thereof.

IN TESTIMONY WHEREOF, I have hereunto set my hand and caused the Seal of the United States of America to be affixed.

Done at the International Peace Arch, Blaine, Washington, this sixteenth day of September in the year of our Lord one thousand nine hundred sixty-four and of the Independence of the United States of America the one hundred eighty-ninth.

Lyndon B. JOHNSON
[SEAL]
By the President:

Dean RUSK
Secretary of State

The Canadian Secretary of State for External Affairs to the Secretary of State
THE SECRETARY OF STATE FOR EXTERNAL AFFAIRS
CANADA

January 22, 1964

Sir,

I have the honour to refer to discussions which have been held between representatives of the Government of Canada and of the Government of the United States of America regarding the Treaty between Canada and the United States of America relating to cooperative development of the water resources of the Columbia River Basin signed at Washington on January 17, 1961. On the basis of these discussions, the Government of Canada understands that the two Governments have agreed to the terms of the attached Protocol.

I should like to propose that, if agreeable to your Government, this Note together with the Protocol attached thereto and your reply, shall constitute an agreement between our two Governments relating to the carrying out of the provisions of the Treaty with effect from the date of the exchange of instruments of notification of the Treaty.

Accept, Sir, the renewed assurances of my highest consideration.

PAUL MARTIN
Secretary of State for External Affairs

The Honourable
Dean RUSK,
Secretary of State of the United States of America, Washington

ANNEX TO EXCHANGE OF NOTES DATED JANUARY 22, 1964 BETWEEN THE
GOVERNMENTS OF CANADA AND THE UNITED STATES REGARDING THE
COLUMBIA RIVER TREATY

PROTOCOL

1. If the United States entity should call upon Canada to operate storage in the Columbia River Basin to meet flood control needs of the United States of America pursuant to Article IV (2) (b) or Article IV (3) of the Treaty, such call shall be made only to the extent necessary to meet forecast flood control needs in the territory of the United States of America that cannot adequately be met by flood control facilities in the United States of America in accordance with the following conditions:

(1) Unless otherwise agreed by the Permanent Engineering Board, the need to use Canadian flood control facilities under Article IV(2) (b) of the Treaty shall be considered to have arisen only in the case of potential floods which could result in a peak discharge in excess of 600,000 cubic feet per second at The Dalles, Oregon, assuming the use of all related storage in the United States of America existing and under construction in January 1961, storage provided by any dam constructed pursuant to Article XII of the Treaty and the Canadian storage described in Article IV (2) (a) of the Treaty.

(2) The United States entity will call upon Canada to operate storage under Article IV(3) of the Treaty only to control potential floods in the United States of America that could not be adequately controlled by all the related storage facilities in the United States of America existing at the expiration of 60 years from the ratification date but in no event shall Canada be required to provide any greater degree of flood control under Article IV

(3) of the Treaty than that provided for under Article IV(2) of the Treaty.

(4) A call shall be made only if the Canadian entity has been consulted whether the need for flood control is, or is likely to be, such that it cannot be met by the use of flood control facilities in the United States of America in accordance with subparagraphs (1) or (2) of this paragraph. Within ten days of receipt of a call, the Canadian entity will communicate its acceptance, or its rejection or proposals for modification of the call, together with supporting considerations. When the communication indicates rejection or modification of the call the United States entity will review the situation in the light of the communication and subsequent developments and will then withdraw or modify the call if practicable. In the absence of agreement on the call or its terms the United States entity will submit the matter to the Permanent Engineering Board provided for under Article XV of the Treaty for assistance as contemplated in Article XV (2) (e) of the Treaty. The entities will be guided by any instructions issued by the Permanent Engineering Board. If the Permanent Engineering Board does not issue instructions within ten days of receipt of a submission the United States entity may renew the call for any part or all of the storage covered in the original call and the Canadian entity shall forthwith honour the request.

2. In preparing the flood control operating plans in accordance with paragraph 5 of Annex A of the Treaty, and in making calls to operate for flood control pursuant to Article IV (2) (b) and Article IV (3) of the Treaty, every effort will be made to minimize flood damage both in Canada and the United States of America.

3. The exchange of Notes provided for in Article VIII (1) of the Treaty shall take place contemporaneously with the exchange of the Instruments of Ratification of the Treaty provided for in Article XX of the Treaty.

4.

(1) During the period and to the extent that the sale of Canada's entitlement to downstream power benefits within the United States of America as a result of an exchange of Notes pursuant to Article VIII (1) of the Treaty relieves the United States of America of its obligation to provide east-west standby transmission service as called for by Article X(1) of the Treaty, Canada is not required to make payment for the east-west standby transmission service with regard to Canada's entitlement to downstream power benefits sold in the United States of America.

(2) The United States of America is not entitled to any payments of the character set out in subparagraph (1) of this paragraph in respect of that portion of Canada's entitlement to downstream power benefits delivered by the United States of America to Canada at any point on the Canada-United States of America boundary other than at a point near Oliver, British Columbia, and the United States of America is not required to provide the east-west standby transmission service referred to in subparagraph (1) of this paragraph in respect of the portion of Canada's entitlement to downstream power benefits which is so delivered.

5. Inasmuch as control of historic streamflows of the Kootenay River by the dam provided for in Article XII (1) of the Treaty would result in more than 200,000 kilowatt years per annum of energy benefit downstream in Canada, as well as important flood control protection to Canada, and the operation of that dam is therefore of concern to Canada, the entities shall, pursuant to Article XIV(2) (a) of the Treaty, cooperate on a continuing basis to coordinate the operation of that dam with the operation of hydroelectric plants on the Kootenay River and elsewhere in Canada in accordance with the provisions of Article XII (5) and Article XII (6) of the Treaty.

6.

(1) Canada and the United States of America are in agreement that Article XIII (1) of the Treaty provides to each of them a right to divert water for a consumptive use.

(2) Any diversion of water from the Kootenay River when once instituted under the provisions of Article XIII of the Treaty is not subject to any limitation as to time.

7. As contemplated by Article IV (1) of the Treaty, Canada shall operate the Canadian storage in accordance with Annex A and hydroelectric operating plans made thereunder. Also, as contemplated by Annexes A and B of the Treaty and Article XIV (2) (k) of the Treaty, these operating plans before they are agreed to by the entities will be conditioned as follows:

(1) As the downstream power benefits credited to Canadian storage decrease with time, the storage required to be operated by Canada pursuant to paragraphs 6 and 9 of Annex A of the Treaty, will be that required to produce those benefits.

(2) The hydroelectric operating plans, which will be based on Step I of the studies referred to in paragraph 7 of Annex B of the Treaty, will provide a reservoir-balance relationship for each month for the whole of the Canadian storage committed rather than a separate relationship for each of the three Canadian storages. Subject to compliance with any detailed operating plan agreed to by the entities as permitted by Article XIV (2) (k) of the Treaty, the manner of operation which will achieve the specific storage or release of storage called for in a hydroelectric operating plan consistent with optimum storage use will be at the discretion of the Canadian entity.

(3) Optimum power generation at-site in Canada and downstream in Canada and the United States of America referred to in paragraph 7 of Annex A of the Treaty will include power generation at-site and downstream in Canada of the Canadian storages referred to in Article II (2) of the Treaty, power generation in Canada which is coordinated therewith, downstream power benefits from the Canadian storage which are produced in the United States of America and measured under the terms of Annex B of the Treaty, power generation in the Pacific Northwest Area of the United States of America and power generation coordinated therewith.

8. The determination of downstream power benefits pursuant to Annex B of the Treaty, in respect of each year until the expiration of thirty years from the commencement of full operation in accordance with Article IV of the Treaty of that portion of the Canadian storage described in Article II of the Treaty which is last placed in full operation, and thereafter until otherwise agreed upon by the entities, shall be based upon stream flows for the thirty-year period beginning July 1928 as contained in the report entitled "Extension of Modified Flows Through 1958-Columbia, River Basin" and dated June 1960, as amended and supplemented to June 29, 1961, by the Water Management Subcommittee of the Columbia Basin Inter-Agency Committee.

9.

(1) Each load used in making the determinations required by Steps II and III of paragraph 7 of Annex B of the Treaty shall have the same shape as the load of the Pacific Northwest area as that area is defined in that paragraph.

(2) The capacity credit of Canadian storage shall not exceed the difference between the firm load carrying capabilities of the projects and installations included in Step II of paragraph 7 of Annex B of the Treaty and the projects and installations included in Step III of paragraph 7 of Annex B of the Treaty.

10. In making all determinations required by Annex B of the Treaty the loads used shall include the power required for pumping water for consumptive use into the Banks Equalizing Reservoir of the Columbia Basin Federal Reclamation Project but mention of this particular load is not intended in any way to exclude from those loads any use of power that would normally be part of such loads.

11. In the event operation of any of the Canadian storages is commenced at a time which would result in the United States of America receiving flood protection for periods longer than those on which the amounts of flood control payments to Canada set forth in Article VI(1) of the Treaty

are based, the United States of America and Canada shall consult as to the adjustments, if any, in the flood control payments that may be equitable in the light of all relevant factors. Any adjustment would be calculated over the longer period or periods on the same basis and in the same manner as the calculation of the amounts set forth in Article VI (1) of the Treaty. The consultations shall begin promptly upon the determination of definite dates for the commencement of operation of the Canadian storages.

12. Canada and the United States of America are in agreement that the Treaty does not establish any general principle or precedent applicable to waters other than those of the Columbia River Basin and does not detract from the application of the Boundary Waters Treaty, 1909, to other waters.

The Secretary of State to the Canadian Secretary of State for External Affairs

DEPARTMENT OF STATE
WASHINGTON

January 22, 1964

Sir:

I have the honor to refer to your note dated January 22, 1964, together with the Annex thereto regarding the Treaty between Canada and the United States of America relating to cooperative development of the water resources of the Columbia River Basin signed at Washington on January 17, 1961.

I wish to advise you that the Government of the United States of America agrees that your note with the Annex thereto, together with this reply, shall constitute an agreement between our two Governments relating to the carrying out of the provisions of the Treaty with effect from the date of the exchange of instruments of ratification of the Treaty.

Accept, Sir, the renewed assurances of my highest consideration.

Dean RUSK

The Honourable
Paul MARTIN, P.C., Q.C.,
Secretary of State for External Affairs,
Ottawa.

DEPARTMENT of STATE
WASHINGTON

January 22,1964

Sir:

I have the honor to refer to the discussions which have been held between representatives of the Government of Canada and of the Government of the United States of America regarding a sale of Canada's entitlement to downstream power benefits under the Treaty between Canada and the United States of America relating to cooperative development of the water resources of the Columbia River Basin, signed on January 17,1961.

On the basis of these discussions my Government understands that the two Governments recognize that it would be in the public interest of both countries if Canada's entitlement to downstream power benefits could be disposed of, as contemplated by Article VIII of the Treaty, in accordance with general conditions and limits similar to those set out in detail in the attachment hereto, and further, that before such a disposition can be concluded and confirmed by the two Governments, additional steps must be taken in each country. Therefore, in furtherance of this aim, it is understood the two Governments are agreed that:

a) the Government of the United States will use its best efforts to arrange for disposition of Canada's entitlement to downstream power benefits within the United States of America in accordance with the general conditions and limits set forth in the attachment, and

b) the Government of Canada will use its best efforts to accomplish all those things which are considered necessary and preliminary to ratification of the Treaty as quickly as possible, including any arrangements for implementation and acceptance of the general conditions and limits set forth in the attachment.

I should like to propose that if agreeable to your Government this note together with the attachment and your reply shall constitute an agreement by our Governments relating to the Treaty.

Accept, Sir, the renewed assurances of my highest consideration.

Dean RUSK

The Honorable
Paul MARTIN, P.C., Q.C.,
Secretary of State for External Affairs,
Ottawa.

ATTACHMENT RELATING TO TERMS OF SALE

A. The disposition shall consist of the downstream power benefits to which Canada is entitled under the Treaty, other than Canada's entitlement to downstream power benefits resulting from

the construction or operation of a project described in Article IX of the Treaty, and shall be by way of a contract of sale authorized in accordance with Article VIII of the Treaty between the British Columbia Hydro and Power Authority and a single Purchaser containing provisions mutually satisfactory to the parties to the contract but shall be subject to and be operative in accordance with the following general conditions and limits:

1.

(a) The storages described in Article II of the Treaty shall be fully operative for power purposes in accordance with the following schedule:

Storage described in Article II (2) (c) -approximately 1,400,000 acre feet on April 1, 1968,

Storage described in Article II (2) (b) -approximately 7,100,000 acre feet on April 1, 1969,

Storage described in Article II (2) (a)-approximately 7,000,000 acre feet on April 1, 1973.

(b) The period of sale of the entitlement allocated to each of the storages shall terminate and expire thirty years from the date on which that storage is required to be fully operative for power purposes in accordance with the schedule in subparagraph (a) of this paragraph.

(c) In the event any storage is not fully operative in accordance with the schedule in subparagraph (a) of this paragraph or if, during the period of sale, the storage is not operated as required by the hydroelectric operating plans agreed upon in accordance with the Treaty, as modified by any detailed operating plan agreed upon in accordance with Article XIV (2) (k) of the Treaty, and the Canadian entitlement is thereby reduced, the British Columbia Hydro and Power Authority shall pay the Purchaser an amount equal to the cost it would have to incur to replace that part of the reduction in the Canadian entitlement which the vendees of the Purchaser would have used other than costs that could have been avoided had every reasonable effort to mitigate losses been made by the Purchaser, the United States entity and the owners of non-federal dams on the Columbia River in the United States of America. Alternatively, the British Columbia Hydro and Power Authority may, at its option, supply power to the Purchaser in an amount which assures that the Purchaser receives the capacity and energy which would have constituted that part of the reduction in the Canadian entitlement that the vendees of the Purchaser could have used if there had been no default, together with appropriate adjustments to reflect transmission costs in the United States of America, delivery to be made when the loss of power would otherwise have occurred.

If the assurance described in paragraph B.5. of this attachment is given to the Purchaser, the United States entity may succeed to all the rights of the Purchaser and its vendees to receive the entire Canadian entitlement, or that part that could be used by the vendees, and to be compensated by British Columbia Hydro and Power Authority in the event of non-receipt thereof. The United States entity agrees that before it purchases more costly power from any third party for the purpose of supplying the necessary amount of the Canadian entitlement to the Purchaser, it will first cause to be delivered to the Purchaser, or for its account, any available surplus capacity or energy from the United States Federal Columbia River System and

compensation to the United States entity because of such deliveries shall be computed by applying the then applicable rate schedules of the Bonneville Power Administration to the deliveries.

In the event of disagreement, determination of compensation in money or power due under this paragraph shall be resolved by arbitration and shall be confined to the actual loss incurred in accordance with the principles in this paragraph.

(d) For the purpose of allocating downstream power benefits among the Treaty storages from April 1, 1998 to April 1, 2003, the percentage of downstream power benefits allocated to each Treaty storage shall be the percentage of the total of the Treaty storages provided by that storage.

2. For the period of the sale the British Columbia Hydro and Power Authority shall operate and maintain the Treaty storages in accordance with the provisions of the Treaty.

3.

(a) The purchase price of the entitlement shall be \$254,400,000, in United States funds as of October 1, 1964, subject to adjustment, in the event of an earlier payment of all or part thereof, to the then present worth, at a discount rate of 4 1/2 percent per annum.

(b) The purchase price shall be paid to Canada contemporaneously with the exchange of ratifications of the Treaty and shall be applied towards the cost of constructing the Treaty projects through a transfer of the purchase price by Canada to the Government of British Columbia, pursuant to arrangements deemed satisfactory to Canada, to be entered into between Canada, and the Government of British Columbia.

4. If, during the period of the sale, there is any reduction in Canada's entitlement to downstream power benefits which results from action taken by the Canadian entity pursuant to paragraph 7 of Annex A of the Treaty, the British Columbia Hydro and Power Authority shall, by supplying power to the Purchaser, or otherwise as may be agreed, offset that reduction in a manner so that the Purchaser will be compensated therefor.

5. The Purchaser shall have and may exercise the rights of the British Columbia Hydro and Power Authority relating to the negotiation and conclusion with the United States entity, of proposals relating to the exchanges authorized by Article VIII (2) of the Treaty with respect to any portion of Canada's entitlement to downstream power benefits sold to the Purchaser.

B. The Notes to be exchanged pursuant to Article VIII (1) of the Treaty shall contain, inter alia, provisions incorporating the following requirements:

1. As soon as practicable after start of construction of each Treaty project the Canadian and United States entities shall agree upon a program for filling the storage provided by the project. The filling program shall have the objective of having the storages described in Article II (2) (e) and Article II (2) (b) of the Treaty full by September 1 following the date when the storages become fully operative and the storage provided by the dam mentioned in Article II (2) (a) of the

Treaty full to 15 million acre-feet by September 1, 1975. This objective shall be reflected in the hydroelectric operating plans and shall take into account generating requirements at-site and downstream in Canada and the United States of America to meet loads.

2. In the event the United States of America becomes entitled to compensation in respect of a breach of the obligation under Article IV (6) of the Treaty to commence full operation of a storage, compensation payable to the United States of America under Article XVIII (5) (a) of the Treaty shall be made in an amount equal to 2.70 mills per kilowatt-hour, and 46 cents per kilowatt of dependable capacity for each month or fraction thereof, in United States funds, for and in lieu of the power which would have been forfeited under Article XVIII (5) (a) of the Treaty if Canada's entitlement to downstream power benefits had not been sold in the United States of America. Alternatively, Canada may, at its option, supply capacity and energy to the United States entity in an amount equal to that which would have been forfeited, together with appropriate adjustments to reflect transmission costs in the United States of America delivery to be made when the loss would otherwise have occurred.

3. A diminution of Canada's entitlement to downstream power benefits sold in the United States of America which is directly attributable to a failure to comply with paragraph A.1 (a) or paragraph A.2 of this attachment, in the absence of compensation therefor by the British Columbia Hydro and Power Authority, constitutes a breach of the Treaty by Canada and Article XVIII (5) of the Treaty and the exculpatory provisions in Article XVIII of the Treaty do not apply to such breach. Compensation or replacement of power as specified in paragraph A.1 (c) of this attachment shall be made by Canada and shall be accepted by the United States of America as complete satisfaction of Canada's liability under this paragraph.

4. For any year in which Canada's entitlement to downstream power benefits is sold in the United States of America, the United States entity may decide the amount of the downstream power benefits for purposes connected with the disposition thereof in the United States of America. This authorization, however, shall not affect the rights or relieve the obligations of the Canadian and United States entities relating to joint activities under the provisions of Article XIV and Annexes A and B of the Treaty; nor shall it apply to determination of compensation provided for in paragraph A.1 (e) and paragraph B.2 of this attachment.

5. If necessary to accomplish the sale of Canada's entitlement to downstream power benefits in accordance with this attachment, the United States entity shall assure unconditionally the delivery to or for the account of the Purchaser, by appropriate exchange contracts, of an amount of power agreed between the United States entity and the Purchaser to be the equivalent of the entitlement during the period of the sale.

C. Canada shall designate the British Columbia Hydro and Power Authority as the Canadian entity for the purposes of Article XIV (1) of the Treaty.

The Canadian Secretary of State for External Affairs to the Secretary of State

THE SECRETARY OF STATE FOR EXTERNAL AFFAIRS
CANADA

January 22, 1964

Sir,

I have the honour to refer to your Note dated January 22, 1964, together with the attachment thereto regarding the Treaty between Canada and the United States of America relating to cooperative development of the water resources of the Columbia River Basin signed at Washington on January 17, 1961.

I wish to advise you that the Government of Canada agrees that your Note with the attachment thereto, together with this reply, shall constitute an agreement between our two Governments relating to the Treaty.

Accept, Sir, the renewed assurances of my highest consideration.

Paul MARTIN
Secretary of State for External Affairs

The Honourable
Dean RUSK,
Secretary of State of the United States of America;
Washington.

The Canadian Secretary of State for External Affairs to the American Ambassador
DEPARTMENT OF EXTERNAL AFFAIRS
CANADA

No. 140 Ottawa, September 16, 1964.

Excellency,

I have the honour to refer to the Treaty between Canada and the United States of America relating to cooperative development of the water resources of the Columbia River Basin signed at Washington on 17 January 1961, to the Protocol attached to my Note to the Honourable Dean Rusk, Secretary of State of the United States of America, dated 22 January 1964, and to the exchange of instruments of ratification of the Treaty which occurred today.

I also have the honour to refer to the discussions which have been held between representatives of the Government of Canada and of the Government of the United States of America in connection with the Exchange of Notes, dated 22 January 1964, regarding sale in the United States of America of Canada's entitlement under the Treaty to downstream power benefits.

My Government also understands that your Government has designated the Administrator of the Bonneville Power Administration, Department of the Interior, and the Division Engineer, North Pacific Division, Corps of Engineers, Department of the Army, as the United States Entity for the purposes of Article XIV (1) of the Treaty, and I would inform you that the Government of Canada has designated the British Columbia Hydro and Power Authority, a corporation incorporated in the Province of British Columbia by the British Columbia Hydro and Power Authority Act, 1964, as the Canadian Entity for the purposes of that Article. A copy of the designation is attached hereto.

On the basis of those discussions the Government of Canada proposes that the Canadian Entitlement Purchase Agreement regarding the sale in the United States of America of the Canadian Entitlement under the Treaty to downstream power benefits entered into between the British Columbia Hydro and Power Authority and the Columbia Storage Power Exchange, the single purchaser referred to in the attachment to your Note of January 22, 1964, relating to the terms of the sale, a copy of which agreement is attached hereto, be authorized for the purposes of Article VIII (1) of the treaty as a disposal of the Canadian Entitlement in the United States of America for the period and in accordance with the other terms and provisions set out in the Canadian Entitlement Purchase Agreement.

My Government also understands that your Government pursuant to paragraph E.5 in the attachment to Mr. Secretary Rusk's Note of January 22, 1964, relating to the terms of the sale, has determined that the United States Entity shall enter into and that it has entered into the Canadian Entitlement Exchange Agreements which agreements assure unconditionally the delivery for the account of the Columbia Storage Power Exchange of an amount of power agreed between the United States Entity and the Columbia Storage Power Exchange to be the equivalent of the Canadian Entitlement being sold under the Canadian Entitlement Purchase Agreement, and that the United States Entity has succeeded to all the rights and obligations of the Columbia Storage Power Exchange under the Canadian Entitlement Purchase Agreement other than the obligation to pay the purchase price, and further that the United States Entity has, pursuant to Article XI of the Treaty, approved the use of the improved stream flow in the United States of America brought about by the Treaty by entering into Canadian Entitlement Allocation Agreements with owners of non-Federal dams on the Columbia River.

My Government also understands that the two Governments are agreed that the Government of the United States of America undertakes that:

(1) So long as the Canadian Entitlement Exchange Agreements remain in force, the United States Entity will perform all the obligations of the Columbia Storage Power Exchange under the Canadian Entitlement Purchase Agreement other than the obligation to pay the purchase price specified in Section 3 of the Canadian Entitlement Purchase Agreement;

(2) In the event the Canadian Entitlement is reduced as a result of a failure on the part of the Canadian Entity to comply with Section 4 of the Canadian Entitlement Purchase Agreement and if the failure results other than from wilful omission by the Canadian Entity to fulfill its obligations under that agreement, the United States Entity will, without compensation, offset the effect of that failure by adjusting the operation of the portion of the System described in Stop I of

paragraph 7 of Annex B of the Treaty which is in the United States of America to the extent that the United States Entity can do so without loss of energy or capacity to that portion of the System; and

(3) If the procedure described in paragraph (2) above does not fully offset, the effect of the failure, then to the extent the entities agree thereon, an additional offsetting adjustment in the operation of the portion of the System described in Step I of Annex B of the Treaty which is in the United States of America and which would result in only an energy loss will be made if the Canadian Entity delivers to the United States Entity energy sufficient to make up one half that energy loss.

(4) In order to make up any reduction in the Canadian Entitlement, which reduction is to be determined in accordance with Section 6 of the Canadian Entitlement Purchase Agreement, the United States Entity will cause to be delivered the least expensive capacity and energy available and, to the extent that it would be the least expensive available, will deliver, at the then applicable rate schedules of the Bonneville Power Administration, any available surplus capacity and energy from the United States Federal Columbia River System.

The Government of Canada also proposes that:

(5) Contemporaneously with the exchange of the instruments of ratification CSPE shall have paid to Canada the sum in United States funds of \$253,929,534.25, being the equivalent of the sum of \$254,400,000 in United States funds as of October 1, 1964 adjusted to September 16, 1964 at a discount rate of 4 1/2 percent per annum on the basis set out in the January 22, 1964 Exchange of Notes between our two Governments relating to the terms of sale, which sum shall be applied towards the cost of constructing the Treaty projects through a transfer of the sum by Canada to the Government of British Columbia pursuant to arrangements entered into between Canada and British Columbia.

(6) No modification or renewal of the Canadian Entitlement Purchase Agreement shall be effective until approved by the Governments of Canada and the United States of America, evidenced by an Exchange of Notes.

(7) The storages described in Article II of the Treaty shall be considered fully operative when the facilities for such storages are available and outlet facilities are operable for regulating flows in accordance with the flood control and hydroelectric operating plans.

(8) As soon as practicable, the Canadian and United States Entities shall agree upon a program for filling the storage provided by each of the Treaty projects. The filling program shall have the objective of having the storages described in Article II (2) (a), Article II (2) (ii), and Article II (2) (e) of the Treaty filled to the extent that usable storage, in the amounts provided for each storage in Article II of the Treaty is available by September 1 following the date when the storage becomes fully operative, and of having the storage provided by the dam described in Article II (2) (a) filled to 15 million acre-feet by September 1, 1975. This objective shall be reflected in the hydroelectric operating plans and shall take into account generating requirements

at-site and downstream in Canada and the United States of America to meet loads and requirements for flood control.

(9) In the event the United States of America becomes entitled to compensation from Canada for loss of downstream power benefits, other than Canada's entitlement to downstream power benefits, in respect of a breach of the obligation Under Article IV(6) of the Treaty to commence full operation of a storage, compensation payable to the United States of America under Article XVIII (5) (a) of the Treaty shall be made in an amount equal to 2.70 mills per kilowatt-hour of energy, and 46 cents per kilowatt of dependable capacity for each month or fraction thereof, in United States Funds, for and in lieu of the power which would have been forfeited under Article XVIII(5) (a) of the Treaty if Canada's entitlement to downstream power benefits had not been sold in the United States of America. The power which would have been forfeited shall be Canada's entitlement to downstream power benefits attributable to the particular storage had it commenced full operation in accordance with Article IV (6) of the Treaty and shall consist of (1) dependable capacity for the period of forfeiture and (2) that portion of average annual usable energy which would have been available during the period of forfeiture assuming the energy to be available at a uniform rate throughout the year. Alternatively, Canada may, at its option, offset the power for which compensation is to be made by delivering capacity and energy to the United States Entity, such delivery to be made, unless otherwise agreed by the entities, during the period of breach and at a uniform rate. The option for Canada to provide power in place of paying money shall permit Canada to make compensation partly by supplying power and partly by paying money, as may be mutually agreed by the entities.

(10) The Canadian Entity shall at reasonable intervals provide current reports to the United States Entity of the progress of construction of the Treaty storages. In the event there is a likelihood of delay in meeting the completion dates set out in Section 4 of the Canadian Entitlement Purchase Agreement or a delay which will give rise to a claim under paragraph (9) hereof the Canadian Entity will advise of the probability of power being available to make the compensation required.

(11) The Canadian Entity does not make compensation for a reduction in the Canadian Entitlement arising as a result of a failure to comply with Section 4 of the Canadian Entitlement Purchase Agreement, Canada shall make such compensation and such compensation shall be accepted in complete satisfaction of all claims arising out of the failure in respect of the reduction in the Canadian Entitlement for which such compensation was made.

(12) For any year in which Canada's Entitlement to downstream power benefits is sold to Columbia Storage Power Exchange, the United States Entity may decide the amount of the downstream power benefits for purposes connected with the disposition thereof in the United States of America. This authorization, however, shall neither affect the rights or relieve the obligations of the Canadian and United States Entities relating to joint activities under the provisions of Article XIV and Annexes A and B of the Treaty, nor shall it apply to determination of compensation provided for in the Canadian Entitlement Purchase Agreement or pursuant to paragraph (9) hereof or to determination of the power benefits to which Canada is entitled.

(13) Any power delivered by the Canadian Entity or by Canada in accordance with the Canadian Entitlement Purchase Agreement or this Note shall be delivered at points of interconnection on the Canadian-United States border mutually acceptable to the entities. Appropriate adjustments will be made to reflect transmission costs and transmission losses in the United States of America.

(14) Any dispute arising under the Canadian Entitlement Purchase Agreement, including, but without limitation, a dispute whether any event requiring compensation has occurred, the amount of compensation due or the amount of any over-delivery of power is agreed to be a difference under the Treaty to be settled in accordance with the provisions of Article XVI of the Treaty, and the parties to the Canadian Entitlement Purchase Agreement may avail themselves of the jurisdiction hereby conferred.

The Government of Canada therefore proposes that if agreeable to your Government this Note together with your repay thereto constitutes an agreement by our Governments relating to the Treaty with effect from the date of the exchange of instruments of ratification of the Treaty.

Accept, Excellency, the renewed assurances of my highest consideration.

PAUL MARTIN
Secretary of State for External Affairs.

His Excellency,
W. WALTON BUTTERWORTH,
Ambassador of the United States of America,
Ottawa.

Certified to be a true copy of a Minute of a Meeting of the Committee of the Privy Council, approved by His Excellency the Governor General on the 4th September, 1964.

CANADA

PRIVY COUNCIL

The Committee of the Privy Council, on the recommendation of the Right Honourable Lester B. Pearson, the Prime Minister, advise that Your Excellency may be pleased to designate the British Columbia Hydro and Power Authority, a corporation incorporated in the Province of British Columbia by the British Columbia Hydro and Power Authority Act 1964, as the Canadian entity for the purposes of Article XIV of a treaty dated January 17, 1961 at Washington, D.C. U.S.A. between Canada and the United States of America relating to co-operative development of the water resources of the Columbia River Basin, such designation to take effect on the date on which the Instruments of Ratification of the Treaty shall be exchanged.

[signature]

CANADIAN ENTITLEMENT PURCHASE AGREEMENT

This Agreement executed this thirteenth day of August, 1964, by and between COLUMBIA STORAGE POWER EXCHANGE, a nonprofit corporation organized under the laws of the State of Washington, hereinafter referred to as "CSPE", and

BRITISH COLUMBIA HYDRO AND POWER AUTHORITY, a corporation incorporated in the Province of British Columbia, Canada, by the British Columbia Hydro and Power Authority Act, 1964, hereinafter referred to as "The Authority".

WHEREAS:

A. The Governments of the United States of America and Canada an exchanging instruments of ratification of the Treaty Between Canada and the United States of America Relating to the Cooperative Development of the Water Resources of the Columbia River Basin Signed at Washington January 17, 1961. By an Exchange of Notes dated January 22, 1964, the two Governments agreed upon the terms of a Protocol with effect, from the date of the exchange of instruments of ratification of the Treaty aforesaid (which Treaty and Protocol are hereinafter referred to as the "Treaty").

B. Under the terms of the Treaty, Canada is entitled to receive from the United States one half of the annual average usable energy and one half of the dependable hydroelectric capacity which can be realized in the United States each year as a result of use of the improved stream flow on the Columbia River created by storage to be constructed in Canada.

C. The Government of Canada and the Government of British Columbia have entered into an agreement dated 8 July, 1963, and a supplementary agreement dated 13 January, 1964, wherein it was agreed that all proprietary rights, title and interests arising under the Treaty, including all rights to downstream power benefits, belong to the Government of British Colombia, and providing that Canada shall designate the Authority as the Canadian Entity as provided for in Article XIV of the Treaty. Pursuant to such agreement Canada is designating the Authority as the Canadian Entity.

D. The Authority is, by virtue of an Order in Council of the Province of British Columbia, dated August 7, 1964, required and authorized to exercise all the rights and powers granted to the Canadian Entity and to perform all the obligations imposed on the Canadian Entity by the Treaty and to enter into this Agreement.

E. CSPE is incorporated with the object of purchasing for a term of years Canada's rights to downstream power benefits under the Treaty and incurring indebtedness to finance such purchase and disposing of such rights under such arrangements as may be necessary to retire the corporate indebtedness and to pay the necessary expenses of CSPE incidental thereto.

F. The Governments of the United States of America and Canada, as contemplated by Article VIII of the Treaty and in pursuance of the Agreement of the two Governments contained in an Exchange of Notes dated January 22, 1964, relating thereto, are by an Exchange of Notes authorizing the disposition for a term of years within the United States of America of Canada's rights to downstream power benefits under the Treaty, which disposition when so authorized is

to be effectuated by this Agreement in accordance with the provisions of the Treaty and documents supplementary thereto.

Now, therefore, it is agreed:

Section 1. Term

This Agreement shall be effective when authorized by the Governments of Canada and the United States of America by an Exchange of Notes pursuant to the Treaty and shall terminate at midnight on March 31, 2003.

Section 2. Conveyance.

(1) The Authority does hereby sell, assign, and convey unto CSPE, and CSPE does hereby accept, the entitlement of Canada, as described in Article V(1) of the Treaty, to the downstream power benefits determined in accordance with Article VII of the Treaty, save and except the entitlement of Canada to the downstream power benefits resulting from the construction or operation of the project referred to in Article IX of the Treaty, for the following period of time:

(a) The benefits resulting from the storage described in Article II (2) (e) of the Treaty (Hereinafter referred to as Duncan Lake Storage) for a period of 30 years commencing April 1, 1968; and

(b) The benefits resulting from the storage described in Article II(2) (b) of the Treaty (hereinafter referred to as Arrow Lakes storage) for a period of 30 years commencing April 1, 1969; and

(c) The benefits resulting from the storage described in Article II (2) (a) of the Treaty (hereinafter referred to as Mica Crook Storage) for a period of 30 years commencing April 1, 1973.

(2) All of the entitlement to the downstream power benefits hereby conveyed for the aforementioned periods of time, without the reductions provided for in paragraph 7 of Annex A of the Treaty is hereinafter referred to as "the Canadian Entitlement".

(3) For the purpose of allocating downstream power benefits among the three Canadian storage provided for in the Treaty between April 1, 1998, and March 31, 2003, the percentage of downstream power, benefits allocable to each of the said storages shall be the percentage of the total of the Canadian storages provided by that storage as setout in Article II of the Treaty.

Section 3. Payment by CSPE.

Contemporaneously with the exchange of the instruments of ratification, CSPE is causing to be paid to Canada the sum, in United States funds, of \$254,400,000.00 as of October 1, 1964, subject too adjustment in the event of an earlier payment thereof to the then part worth at a discount rate of 4 1/2 percent per annum, which sum shall be applied towards the cost of constructing the Treaty projects through a transfer of the sum by Canada to the Government of

British Columbia pursuant to arrangements entered into between Canada and British Columbia. The Authority acknowledges that the receipt by Canada of the said sum is consideration for all the covenants of the authority in this Agreement and particularly the covenants to construct and operate the Treaty projects and is a complete discharge of CSPE for the full purchase price for the sale effected in Section 2 of this Agreement.

Section 4. Covenants.

(1) The Authority covenants and agrees with CSPE that it will undertake all requisite construction work in a good and workmanlike manner and that the storages described in Article II of the Treaty shall be fully operative for power purposes under this Agreement by the following dates:

(a) The Duncan Lake storage, April 1, 1968.

(b) The Arrow Lakes storage, April 1, 1969.

(c) The Mica Creek storage, April 1, 1973.

To be fully operative the facilities for such storages shall be completed to the extent that storages are available and outlet facilities are operable for regulating flows in accordance with flood Control and hydroelectric operating plans as contemplated by the Treaty.

(2) The Authority covenants and agrees with CSPE that it will operate and maintain the Treaty storages in a good and workmanlike manner and in accordance with the provisions of the Treaty and any arrangements made pursuant to the Treaty and that it will not take any action prohibited by the Treaty.

Section 5. Flood Control.

Nothing in this Agreement affects or alters the obligations, rights, and privileges of the entities under the Treaty relating to operation and compensation for flood control and without restricting the generality of the foregoing, it is expressly agreed that any reduction in generation in the United States brought about by operation for flood control under the Treaty or any flood control arrangements made pursuant to the Treaty shall not be a reduction in the Canadian Entitlement for which compensation is required under this Agreement.

Section 6. Compensation.

In the event the Canadian Entitlement is reduced as a result of a failure to comply with Section 4 of this Agreement:

(1) If the failure results other than from wilful omission by the Authority to fulfill its obligations under this Agreement, the United States Entity has agreed that it will, without compensation, offset the effect of that failure by adjusting the operation of the portion of the system described in Step I of paragraph 7 of Annex B of the Treaty which is in the United States to the extent that

the United States Entity can do so without loss of energy or capacity to that portion of the System. If the foregoing procedure does not fully offset the effect of the failure, then to the extent the entities agree thereon, an additional offsetting adjustment in the operation of the portion of the system described in Step I of Annex B of the Treaty which is in the United States and which would result in only an energy loss will be made if the Authority delivers to the United States Entity energy sufficient to make up one half of that energy loss.

(2) If the effect of the failure is not entirely offset by the procedure specified in subsection (1) of this section, the reduction in the Canadian Entitlement shall be deemed to be one half of the difference in dependable hydroelectric capacity and average annual usable energy, capable of being produced by:

(a) the Step II system as specified in Annex B of the Treaty for the year in which the reduction occurs, using the 30 year stream flow record provided for in Section 8 of the Protocol, with allowance in each of the 30 stream flow years for the effect of the Adjustment made in following the procedure specified in subsection (1) of this section and

(b) the same system for that year with the application of allowance in each of the 30 stream flow years for the effects of the occurrence causing the reduction and the dependable hydroelectric capacity and average annual usable energy for the purpose of paragraph (b) of this subsection shall be calculated on the basis of an operation for optimum generation in the United States in the light of the offsetting adjustments and in the light of the effects of the occurrence causing the reduction.

(3) If the failure is the result of an occurrence to which the procedure specified in subsection (1) of this section is not applicable, the reduction shall be deemed to be one half of the difference in dependable hydroelectric capacity and average annual usable energy, capable of being produced by:

(a) the Step II system as specified in Annex B of the Treaty for the year in which the reduction occurs, using the 80 year stream flow record provided for in Section 8 of the Protocol with no allowance for the effects of the occurrence causing the reduction and

(b) the same system for that year with the application of allowance in each of the 30 stream flow years for the effects of the occurrence causing the reduction and the dependable hydroelectric capacity and average annual usable energy for the purposes of paragraph (b) of this subsection shall be calculated on the basis of an operation for optimum generation in the United States in the light of the effects of the occurrence causing the reduction.

(4) The Authority shall make compensation for reductions in the Canadian Entitlement, which reductions are to be determined in accordance with subsections (2) or (3) of this section, in amounts equal to the cost of replacing the reductions in the Canadian Entitlement.

(5) The Authority may at its option, and in lieu of the monetary compensation payable under subsection (4) of this section, make compensation by supplying capacity and energy in an amount equal to the reduction in the Canadian Entitlement determined in accordance with

subsections (2) or (3) of this section and adjusted to reflect transmission costs in the United States, delivery to be made when the loss would otherwise have occurred. The Authority may provide combinations of money, capacity and energy that are mutually acceptable in discharge of its obligation to make compensation under this section.

(6) The Authority shall give notice as soon as possible after it becomes apparent to it that compensation may be due and will at that time indicate the amounts of capacity and energy which it anticipates it will be able to make available.

(7) The United States Entity has agreed that, in order to make up any reduction in the Canadian Entitlement, it will cause to be delivered the least expensive capacity and energy available and, to the extent that it would be the least expensive, will deliver at the then applicable rate schedules of the Bonneville Power Administration any available surplus capacity and energy from the United States Federal Columbia River System. The cost of replacement referred to in subsection (4) of this section shall be determined as if the reduction was in fact made up as contemplated by the agreement referred to in the preceding sentence.

(8) Compensation made in accordance with this section will be accepted as satisfaction of all claims against the Authority with respect to the reduction in the Canadian Entitlement for which such compensation was made and with respect to the act or omission of the Authority from which the right to such compensation arose.

(9) Any obligation to mitigate damages by the United States Entity, CSPE, the vendees of CSPE, and the owners of the non-Federal dams on the Columbia River in the United States is satisfied by compliance with this section.

(10) If the Canadian Entitlement Exchange Agreements referred to in Section 10 are not in force, compensation for a reduction in the Canadian Entitlement in accordance with subsections (2) and (3) of this section, is required only in respect of that part of the reduction in the Canadian Entitlement which CSPE and its vendees could have used and only in respect of costs that could not have been avoided had every reasonable effort to mitigate been made by CSPE and the owners of non-Federal dams on the Columbia River in the United States.

Section 7. Reduction of the Canadian Entitlement in Accordance with the Treaty.

Any reduction in the Canadian Entitlement resulting from action taken pursuant to paragraph 7 of Annex A of the Treaty shall be determined in accordance with subsection (8) of Section 6 of this Agreement and unless otherwise agreed, the Authority shall offset the reduction by supplying capacity and energy equal to the reduction, the energy to be supplied in equal monthly amounts.

Section 8. Settlement of Disputes.

Any dispute arising under this Agreement, including but without limitation a dispute as to whether any event requiring compensation has occurred, the amount of compensation due or the amount of any over-delivery of power, is agreed to be a difference under the Treaty to be settled

in accordance with the provisions of Article XVI of the Treaty. Any determination of compensation in money or power due shall be confined to the actual loss incurred in accordance with the principles contained in Section 6 of this Agreement.

Section 9. Exchanges of Capacity and Energy.

(1) The Authority agrees that CSPE shall have and may exercise the rights of the Authority as the Canadian Entity relating to the negotiation and conclusion with the United States Entity of proposals relating to the exchanges authorized by Article VIII (2) of the Treaty with respect to any portion of the Canadian Entitlement.

(2) It is agreed that no exchange of capacity for energy or of energy for capacity or modification in the delivery of energy in equal amounts each month as provided in the Treaty shall be taken into account in the determination of compensation to be made by the Authority pursuant to this Agreement.

Section 10. Exchange Agreements.

The Bonneville Power Administrator acting as the Administrator and for and on behalf of the United States Entity has by entering into Canadian Entitlement Exchange Agreements, assured unconditionally the delivery to the vendees of CSPE by appropriate exchange contracts of an amount of power agreed between the United States Entity and CSPE to be the equivalent of the Canadian Entitlement, and the United States Entity, while those Agreements are in force, will succeed to all the rights of CSPE and its vendees to receive the entire Canadian Entitlement and all other rights of CSPE arising from this Agreement. CSPE therefore instructs the Authority, until otherwise notified, to make any compensation whether in power or money required to be made by the Authority pursuant to Section 6 or Section 7 of this Agreement to the United States Entity. CSPE agrees that any settlement of a claim for compensation or arrangement entered into pursuant to this Agreement by the United States Entity shall be binding on CSPE.

Section 11. Payments

(1) The Authority shall pay any amount in United States funds determined to be due in accordance with the hereof within thirty days of receipt of an invoice for such amount.

(2) Should the Authority deliver power in excess of the amount required as compensation, then appropriate adjustments shall be made in kind or in money.

Section 12. Approvals.

No modification or renewal of this Agreement shall be effective until approved by the Governments of Canada and the United States of America, evidenced by an Exchange of Notes.

Section 13. Deliveries.

Any power delivered by the Authority pursuant to this Agreement shall be delivered at mutually acceptable points of interconnection on the Canadian-United States border. Appropriate adjustments shall be made to reflect transmission costs and transmission losses in the United States.

Section 14. Notices.

Any notice shall be in writing and shall be delivered or mailed prepaid as follows:

Columbia Storage Power Exchange,
20 N. Main Street
East Wenatchee, Washington, U.S.A.

United States Entity
c/o Bonneville Power Administration
P. O. Box 8621
Portland, Oregon 97208 U.S.A.

British Columbia Hydro and Power Authority
970 Burrard Street
Vancouver 1, British Columbia, Canada,

or such other address as may be signified by notice to the others.

In Witness Whereof, the parties have caused tills Agreement to be executed as of the day and year first above written.

(seal) BRITISH COLUMBIA HYDRO AND POWER AUTHORITY

Attest

_____ By _____
Chairman

By _____
Secretary

(seal) COLUMBIA STORAGE POWER EXCHANGE

Attest

_____ By _____
The American Ambassador to the Canadian Secretary of State for External Affairs
EMBASSY OF THE UNITED STATES or AMERICA

Ottawa, September 16, 1984

No. 75

SIR,

I have the honor to refer to your note No. 140 of September 16, 1964, regarding the disposal of the Canadian entitlement to downstream power benefits in the United States, in accordance with Article VIII (1) of the Treaty between the United States of America and Canada relating to the cooperative development of the water resources of the Columbia River Basin, signed at Washington, January 17, 1961.

I wish to advise you that the Government of the United States of America has designated the Administrator of the Bonneville Power Administration, Department of the Interior, and the Division Engineer, North Pacific Division, Corps of Engineers, Department of the Army, as the United States Entity for the purposes of Article XIV (1) of the Treaty. A copy of the designation is attached to this note.

I wish also to advise that the Government of the United States of America confirms the proposals and understandings set forth in your note, and that your note, together with this reply, shall constitute an agreement between our two Governments relating to the implementation of the provisions of the Treaty with effect from the date of the exchange of instruments of ratification of the Treaty.

Accept, Sir, the renewed assurances of my highest consideration.

W.W. BUTTERWORTH

Enclosure:

As stated.

The Honorable
PAUL MARTIN, P.C., Q.C.,
Secretary of State for External Affairs,
Ottawa.

**EXECUTIVE ORDER No. 11177.
PROVIDING FOR CERTAIN ARRANGEMENTS UNDER THE COLUMBIA
RIVER TREATY**

Whereas the treaty between the United States and Canada relating to cooperative development of the water resources of the Columbia River Basin (signed at Washington, D.C., on January 17, 1961; Executive C, 87th Congress, 1st Session) has come into force; and

Whereas Article XIV of such treaty (hereinafter referred to as the Treaty) provides for the designation of certain entities which are empowered and charged with the duty to formulate and carry out the operating arrangements necessary to implement the Treaty, and authorizes the United States of America to designate one or more of such entities; and

Whereas Article XV of the Treaty authorizes the United States of America to appoint two members of the Permanent Engineering Board established by that Article:

Now, I by virtue of the authority vested in me by the Treaty and by the Constitution and statutes, and as President of the United States, it is hereby ordered as follows:

PART 1. UNITED STATES ENTITY

Section 101. Designation of Entity. The Administrator of the Bonneville Power Administration, Department of the Interior, and the Division Engineer, North Pacific Division, Corps of Engineers, Department of the Army, are hereby designated as an entity under Article XIV of the Treaty, to be known as the United States Entity for the Columbia River Treaty (hereinafter referred to as the Entity). The designated Administrator shall be the Chairman of the Entity.

Section 102. Functions of the Entity. The Entity shall have the functions set forth in Article XIV, and in other provisions, of the Treaty.

Section 103. Departmental responsibilities. This order shall not affect (1) the respective responsibilities of the Army and the Department of the Interior for project operation and administration, (2) the respective responsibilities of the Secretary of the Army and the Chief of Engineers for the supervision and direction of the Department of the Army and the Office of the Chief of Engineers, or (3) the responsibility of the Secretary of the Interior for the supervision and direction of the Department of the Interior.

PART II. UNITED STATES SECTION. PERMANENT ENGINEERING BOARD

Section 201. Appointment of members of the Permanent Engineering Board.

(a) The Secretary of the Army shall each appoint one person as a United States member of the Permanent Engineering Board established by Article XV of the Treaty.

(b) Each such person shall be selected from among appropriately qualified individuals, who at the time of appointment may be but need not necessarily be, officers or employees of the United States, and shall serve as a member of the Board during the pleasure of the appointing Secretary.

Section 202. Alternate members. In addition to the two members to be appointed under the provisions of Section 201 of this order, there shall be two alternate United States members of the Permanent Engineering Board. The provisions of Section 201 of this order shall apply to the selection, appointment, and service of the alternate members.

Section 203. United States Section. The members and alternate members appointed under the foregoing provisions of this Part shall compose the United States Section, Permanent Engineering Board, Columbia River Treaty, hereinafter referred to as the United States Section. The member appointed by the Secretary of the Army under Section 201 (a) of this order shall be the Chairman of the United States Section.

Section 204. Assistance to the United States Section. With the consent of the respective heads thereof, departments and agencies of the Federal Government may, upon the request of the United States Section and to the extent not inconsistent with law, furnish assistance needed by the Section in connection with the performance of its functions.

PART III. GENERAL

Section 301. Reservation. There is hereby reserved the right to modify or terminate any or all of the provisions of this order.

Lyndon B. JOHNSON
The White House

September 19, 1964

The Canadian Secretary of State for External Affairs to the American Ambassador
DEPARTMENT OF EXTERNAL AFFAIRS
CANADA

NO. 141 OTTAWA, September 16, 1964

Excellency,

I have the honour to refer to my Note of January 22, 1964 addressed to the Honourable Dean Rusk, Secretary of State of the United States of America and the Protocol attached thereto regarding a Treaty between Canada and the United States of America relating to cooperative development of the water resources of the Columbia River Basin signed at Washington on 17 January, 1961 and to Mr. Secretary Rusk's reply of the same date. This Exchange of Notes relating to the carrying out of the provisions of the Treaty provides expressly that it shall come into effect from the date of the exchange of instruments of ratification of the Treaty.

The instruments of ratification of the Treaty having been exchanged on this 16th day of September 1964, I should like to propose that our two Governments confirm that the Intergovernmental Agreement set out in the said Exchange of Notes has now come into full force and effect. I should like to propose further that this Note together with your reply shall constitute an agreement between our two Governments with effect from this 16th day of September 1964.

Accept, Excellency, the renewed assurances of my highest consideration.

PAUL MARTIN
Secretary of State for External Affairs

His Excellency,
W. W. BUTTERWORTH,
Ambassador of the United States of America,
Ottawa.

The American Ambassador to the Canadian Secretary of State for External Affairs

EMBASSY OF THE UNITED STATES OF AMERICA

Ottawa, September 16, 1964

No. 76

SIR,

I have the honor to refer to your Note No. 141 dated September 16, 1964 regarding the Treaty between Canada and the United States of America relating to cooperative development of the water resources of the Columbia River Basin signed at Washington on January 17, 1961. I wish to advise you that the Government of the United States of America confirms that the Exchange of Notes with Annex of January 22, 1964 referred to in your note has now come into full force and effect. The Government of the United States of America further agrees that your note together with this reply shall constitute an agreement between our two Governments relating to the carrying out of the provisions of the Treaty with effect from this 16th day of September 1964.

Accept, Sir, the renewed assurances of my highest consideration.

W. W. BUTTERWORTH

The Honorable
PAUL MARTIN, P.C., Q-C-,
Secretary of State for External Affairs,