ORDINANCE NO. 529

AN ORDINANCE AUTHORIZING EXECUTION OF THE TROJAN NUCLEAR PROJECT NET BILLING AGREEMENT WITH THE UNITED STATES OF AMERICA, DEPARTMENT OF THE INTERIOR, ACTING THROUGH THE BONNEVILLE POWER ADMINISTRATOR, AND THE CITY OF CANBY, OREGON; AND DECLARING AN EMERGENCY.

WHEREAS, the City of Canby, County of Clackamas, State of Oregon, is authorized by law to own and operate an electric public utility system for the purpose of furnishing the City and the inhabitants thereof, including public and private corporations within its limits, with electric current for all uses; and

WHEREAS, Bonneville Power Administration (Bonneville) and the utilities of the Pacific Northwest have developed the Ten Year Hydro-Thermal Program under which Bonneville will acquire energy from thermal generating projects developed by nonfederal entities to meet the future power requirements of its preference and other customers of the region; and

WHEREAS, in accordance with the Hydro-Thermal Program the City of Canby proposes to participate in said program along with other preference agencies in the Pacific Northwest by entering into an agreement with Bonneville under which the City of Canby will purchase project capability under net billing procedures; and

WHEREAS, entering into net billing agreement for the Project with Bonneville will benefit the City of Canby making additional amounts of low cost power and energy available from Bonneville to serve the customers of the City of Canby in the future, now, therefore,

THE CITY OF CANBY ORDAINS AS FOLLOWS:

Section 1: That the Mayor and City Recorder execute for and on behalf of the City of Canby, in as many counterparts as they deem proper, the Trojan Nuclear Project Net Billing Agreement (Contract No. 14-03-09183) and in the form attached hereto and by this reference made a part of this Ordinance.

<u>Section 2</u>: It being deemed by the Canby City Council that an emergency exists, this Ordinance shall take effect immediately

upon final reading and passage of this Ordinance.

Passed on first reading at a regular meeting of the Canby City Council held on Monday, October 19, 1970; ordered posted as provided by the Canby City Charter and to come up for final reading and action of the Canby City Council at a special meeting thereof to be held on Monday, November 9, 1970, at 8:00 o'clock a.m., Pacific Standard Time, at the Canby City Hall.

LAWRENCE J. HOUSEN - Mayor

ATTEST:

J. RICHARDSON - City Recorder

Passed on final reading of the Canby City Council this 9th day of November, 1970, by the following vote: Yeas 5. Nays 0

LAWRENCE J. HOUSEN - Mayo

ATTEST:

. R. RICHARDSON - City Recorder

Contract 14-03-09183

3-6-70

TROJAN NUCLEAR PROJECT

AGREEMENT

executed by the

UNITED STATES OF AMERICA

DEPARTMENT OF THE INTERIOR

acting by and through the

BONNEVILLE POWER ADMINISTRATOR

and

THE CITY OF EUGENE, OREGON

and

THE CITY OF CANBY, OREGON

(Net Billing Agreement)
(3 Party)

Index to Sections

Section	<u>on</u>	Page
1.	Definition and Explanation of Terms	4
2.	Exhibits	9
3.	Term of Agreement	9
4.	Financing, Design, Construction, Operation and Maintenance of the Project	10*
5.	Sale, Purchase, and Assignment of Participant's Share	10
6.	Payment by the Participant	12
7.	Payment by the Administrator	14
8.	Scheduling	18
9.	Participant's Right to Use Project Capability	18

(Index to Sections Cont.)

Section	
10. Termination Settlements	19
11. Provisions Relating to Delivery	22
12. Obligations in the Event of Default	23
13. Sources of Participant's Payments	24
14. Modification and Uniformity of Agreement	24
15. Assignment of Agreement	25
16. Approval by Rural Electrification Administrator	25
17. Information and Representation of Participants.	26
18. Applicability of Other Agreements and Instrumen	nts 27
Exhibit A (Table of Participants and Participant's Share)	9
Exhibit B (Project Characteristics)	9
Exhibit C (Provisions Required by Statute or Executive Order)	9

This AGREEMENT, executed October 5, 1970, by the UNITED STATES OF AMERICA (hereinafter called "the Government"), Department of the Interior, acting by and through the BONNEVILLE POWER ADMINISTRATOR (hereinafter called "the Administrator"), and THE CITY OF EUGENE, OREGON (hereinafter called "Eugene"), a municipal corporation of the State of Oregon, acting by and through the Eugene Water & Electric Board, and THE CITY OF CANBY, OREGON, a municipal corporation of the State of Oregon (hereinafter called "the Participant"),

WITNESSETH:

WHEREAS Portland General Electric Company (Portland General) has begun design and construction of the Project; and

WHEREAS Eugene and Portland General and Pacific Power & Light Company have entered into agreements which provide that Eugene will finance and own up to 30 percent of the Project and Portland General will design, construct, operate and maintain the Project; and

WHEREAS the Participants have proposed to purchase a share of Project Capability from Eugene for assignment to the Administrator hereunder; and

WHEREAS Eugene and the Participant have each determined that the sale by Eugene to the Participant of the Participant's Share and the assignment thereof to the Administrator as herein provided will be beneficial to it by reducing the cost of and increasing the amounts of firm power and energy which will be available to serve its customers in the future; and

WHEREAS the Administrator has determined that the acquisition of the Participant's Share as herein provided will assist in attaining the objectives of the Bonneville Project Act and other statutes which pertain to the disposition of electric power and energy from Government projects in the Pacific Northwest; and

WHEREAS the Administrator will pool electric power and energy acquired hereunder with other power available to the Administrator from the Federal Columbia River Power System so that any costs or losses associated with acquiring such power and energy will be borne by the Administrator's rate payers through rate adjustments if necessary; and

WHEREAS the Participant proposes to assign, and the Administrator proposes to acquire, the Participant's Share; and

WHEREAS the Administrator and the Participant are parties to agreements which require payments by the Participant to the

Administrator which may be used to offset payments by the Administrator to the Participant hereunder under a net billing procedure; and

WHEREAS Eugene and the Administrator propose to enter into an agreement (designated as Contract No. 14-03-09181) simultaneously with this agreement which will provide among other things for relationships between Eugene and the Administrator with respect to Project construction, operation, maintenance and budgets; and

WHEREAS the Administrator and Eugene propose to enter into agreements with other Participants containing terms and conditions similar to those specified herein; and

WHEREAS the Administrator is authorized pursuant to law to dispose of electric power and energy generated at various federal hydroelectric projects in the Pacific Northwest and to enter into related agreements;

NOW, THEREFORE, the parties hereto mutually agree as follows:

- 1. Definition and Explanation of Terms.
- (a) "Annual Budget" means the budget adopted by Eugene not less than 45 days prior to the beginning of any Contract Year which itemizes projected costs for Eugene's Ownership Share of the Project applicable to such Contract Year, or, in the case of an amended Annual Budget, applicable to the remainder of such Contract Year. The Annual Budget, as from time to time amended, shall make provision for all of Eugene's costs, including accruals and amortizations, resulting from the ownership, operation (including cost of fuel), and maintenance of and renewals and replacements to the Project, including, but not limited to, the amounts which Eugene is required under the Project Bond Resolution to pay in each

Contract Year into the various funds provided for in the Project Bond Resolution for debt service and all other purposes; <u>provided</u>, <u>however</u>, that the Annual Budget for any portion of a Contract Year prior to the Date of Commercial Operation or September 1, 1974, whichever occurs first, shall include only such amounts as may be agreed upon by Eugene and the Administrator.

To the extent that ORS (Oregon Revised Statutes) 225.270 is applicable to the payments made to Eugene under the Net Billing Agreements, Eugene's costs related to its Ownership Share of the Project shall include only the minimum payment required by that statute. The sum of any such payments and Eugene's payments of ad valorem taxes, payments of taxes in lieu of or equivalent to ad valorem taxes, and payments in lieu of such taxes, included in the Annual Budget shall not exceed the amount of the ad valorem tax payments which Eugene would have made if the valuation for tax purposes of Eugene's Ownership Share of the Project, or portion thereof, within the boundaries of each taxing entity were subject to tax and were added to the value of the property subject to ad valorem taxes by such taxing entity, with its millage rate reduced accordingly, unless Eugene is required by law to make greater payments.

(b) "Billing Statement" means the written statement prepared by Eugene that shows the amount to be paid to Eugene by the Participant for the Participant's Share for a Contract Year or, in the case of an amended Billing Statement, for the remainder of such Contract Year. Such amount shall be determined as to the Participant by multiplying the amount of the Annual Budget or the amended Annual Budget, as the case may be, less any other funds which shall be specified in the Annual Budget as being payable from sources other than the payments to be made under the Net Billing Agreements and other agreements

providing for the s. of any part of Eugene's ership Share of Project Capability, by the Participant's Percentage. At the end of a Contract Year any amount over or under billed during such Contract Year will be accounted for in preparing the Billing Statement for the following Contract Year.

- (c) "Contract Year" (1) means the period commencing on the Date of Commercial Operation, or on January 1, 1974, whichever occurs first, and ending at 12 p.m. on the following December 31, and (2) thereafter means the 12-month period commencing at 12 p.m. on December 31 each year during the term hereof and ending at 12 p.m. on the following December 31, except that the last Contract Year shall end on the date of termination of this agreement.
- (d) "Date of Commercial Operation" means the date fixed by Portland General pursuant to the Project Agreement as the point in time when the Project is ready to be operated on a commercial basis.
- (e) "Eugene's Ownership Share" means 0.30 or such other amount as may be determined under sections 2(b), 2(c), 16 or 17 of the Project Agreement.
- (f) "Eugene's Participant's Share" means the decimal fraction share assigned by Eugene to the Administrator pursuant to Eugene's Net Billing Agreement.
- (g) "Net Billing Agreements" means this and all other agreements for the Project similar to this agreement entered into by Eugene, each of the other Participants and the Administrator (designated as Contracts No. 14-03-09182 through 14-03-09194, inclusive), and the agreement relating to the Project entered into by Eugene and the Administrator (designated as Contract No. 14-03-09181).
- (h) "Participant's Percentage" means the decimal fraction obtained by dividing the Participant's Share by Eugene's Ownership Share.

- (i) "Particip: ; Share" means the decim 'raction share of Project Capability purchased by the Participant hereunder specified in Exhibit A, plus during any period in which a decimal fraction is assigned to the Participant pursuant to sections 7(f) or 12 hereof or pursuant to the counterparts of section 7(b) hereof in the other Net Billing Agreements the decimal fraction share or shares so assigned, and minus any reductions pursuant to sections 5(b) or 12 hereof or pursuant to an assignment by the Participant pursuant to section 7(b) hereof during any period in which such reductions or assignments are in effect.
- (j) "Participants" means those entities, including Eugene, which are specified in Exhibit A, or which become assignees of all or part of the Share of Project Capability of any Participant pursuant to sections 7(b) or 15.
- (k) "Prepaid Costs" means (1) prepaid expenses, (2) prepayments for fuel and supplies and working capital, (3) debt service, paid on Project Bonds, due and payable prior to September 1, 1975, and (4) reserves for debt service and fuel, in each case to the extent provided from payments, offsets or credits made to Eugene under the Net Billing Agreements by the Administrator and the Participants (other than Eugene); provided, however, that there shall not be included in Prepaid Costs (i) any of the foregoing items (and the investment income thereon) to the extent that such items were initially provided from the proceeds of Project Bonds, whether or not such items were used thereafter and replenished from revenues, or (ii) any interest charges or investment income attributable to the items comprising such Prepaid Costs. Such investment income and interest charges shall be appropriately subtracted from or added to the Annual Budget for the then current Contract Year. In the determination of Prepaid Costs the

objective shall be to include only those payment offsets or credits which are in excess of the actual cost of Project Capability through the time the determination is made.

- (1) "Project" means the nuclear generating plant with a net electric capability of approximately 1100 mw, and related property near Rainier, Oregon, as described in Exhibit B. Said Exhibit B may be revised from time to time on mutual agreement of Eugene and the Administrator, after consultation with the Participant, but in any event shall conform to the description of the Project in the Project Bond Resolution.
- (m) "Project Agreement" means the Agreement for Construction, Ownership and Operation of the Trojan Project, as the same may be amended, executed by the Project Owners.
- (n) "Project Bonds" means any bond, bonds or other evidences of indebtedness issued in connection with the Project pursuant to the Project Bond Resolution (1) to finance or refinance Eugene's share of the costs of acquiring and constructing the Project and (2) for any other purpose authorized by the Project Bond Resolution.
- (o) "Project Bond Resolution" means the resolution or resolutions adopted or supplemented by Eugene, as the same may be amended or supplemented, to authorize Project Bonds.
- (p) "Project Capability" means the actual electrical generating capability, if any, of the Project at any particular time (including times when the Project is not operable or operating or the operation thereof is suspended, interrupted, interfered with, reduced or curtailed, in each case in whole or in part) less Project station use and losses.
- (q) "Project Owners" means Eugene, Portland General Electric Company and Pacific Power & Light Company.

- "Prudent \ ity Practice" at a parti ar time means any of the practices, methods, and acts engaged in or approved by a significant proportion of the electrical utility industry prior to such time, or any of the practices, methods and acts which, in the exercise of reasonable judgment in light of the facts known at the time the decision was made, could have been expected to accomplish the desired result at the lowest reasonable cost consistent with reliability, safety and expedition. Prudent Utility Practice shall apply not only to functional parts of the Project but also to appropriate structures, landscaping, painting, signs, lighting and other facilities and public relations programs reasonably designed to promote public enjoyment, understanding and acceptance of the Project. Prudent Utility Practice is not intended to be limited to the optimum practice, method or act, to the exclusion of all others, but rather to be a spectrum of possible practices, methods or acts. Any practice, method or act which pursuant to the Project Agreement is determined to be Prudent Utility Practice shall be deemed to be Prudent Utility Practice hereunder.
- 2. Exhibits. Exhibits A through C are by this reference incorporated herein and made a part of this agreement. Eugene and the Participant shall each be the "Contractor" as that term is used in Exhibit C.
- 3. Term of Agreement. This agreement shall be effective upon execution and delivery and, except as provided in section 10(d), and except as to accrued obligations and liabilities, shall terminate on the earliest of (a) the date on which all Project Bonds have been paid or the date on which funds are set aside for the payment or retirement thereof in accordance with the Project Bond Resolution,

whichever is earlier, \nearrow) the date the Participe s Share is reduced to zero pursuant to section 5(b); or (c) the date of the written notice by Eugene pursuant to section 10(a).

- 4. Financing, Design, Construction, Operation and Maintenance of the Project. Eugene shall perform its duties and exercise its rights under the Project Agreement in accordance with Prudent Utility Practice and shall, in good faith and in accordance with Prudent Utility Practice, use its best efforts to arrange for construction, operation and maintenance of the Project, and to finance its interest therein.
 - 5. Sale, Purchase, and Assignment of Participant's Share.
- (a) Sale of Participant's Share. Eugene hereby sells, and the Participant hereby purchases, the Participant's Share. The purchase price to be paid for each Contract Year by the Participant to Eugene for the Participant's Share shall be the amount specified in the Billing Statement. The Participant shall make the payments to be made to Eugene under sections 5, 6 and 10 whether or not the Project is completed, operable or operating and notwithstanding the suspension, interruption, interference, reduction or curtailment of the Project output, and such payments shall not be subject to any reduction whether by offset or otherwise, and shall not be conditioned upon the performance or nonperformance by Eugene or any other Project Owner or the Administrator or any other Participant under this or any other agreement or instrument.
- (b) <u>Withdrawal of All or Part of Participant's Share</u>. On or before July 1, 1977, Eugene may give a written notice to the Administrator and the Participant that it elects to withdraw and use in its own system all or portions of the Participant's Share upon the following terms and conditions:

- (1) Eugene all not withdraw the Par _pant's Share or any portion thereof prior to July 1, 1984.
- (2) Eugene shall withdraw all of Eugene's Participant's Share prior to the withdrawal of any portion of the Participant's Share.
- (3) Eugene shall withdraw from all Participants (other than Eugene) on a ratable basis.
- (4) Each withdrawal shall remain in effect for the remainder of the contract term.

Such notice shall specify the portion of the Participant's Share to be withdrawn in each Contract Year, and upon the date specified, the Participant's Share shall be so reduced.

In the event Eugene withdraws a part, but not all, of the Participant's Share in any Contract Year, any Prepaid Costs relating to the part withdrawn and applicable to such part after the date of withdrawal, for which the Participant has paid a proportionate share under Annual Budgets for previous years, shall be credited in the Billing Statement for the next Contract Year or Contract Years or liquidated over a reasonable period by such other arrangement as agreed upon by Eugene and the Administrator. Such Prepaid Costs shall bear interest from the date of withdrawal to the date of crediting in a Billing Statement, or the date of payment if such costs are liquidated by other arrangements, at the average of the annual interest rates for each month during such time for three-to-five year issues, United States Government securities (taxable), Money Market Rates, as published by the Board of Governors of the Federal Reserve System in the "Federal Reserve Bulletin" or

equivalent publication, or the maximum rate lawfully payable by Eugene, whichever is less.

- (c) Assignment of Participant's Share to the Administrator. The Participant hereby assigns and the Administrator hereby accepts the assignment of the Participant's Share. In consideration of such assignment, the Administrator shall provide to the Participant the payments, offsets, and credits specified in section 7 and section 10 in the manner provided therein, whether or not the Project is completed, operable or operating and notwithstanding the suspension, interruption, interference, reduction or curtailment of the Project output. Such payments, offsets, or credits to be made by the Administrator under this agreement shall not be subject to any reduction whether by offset or otherwise, except as specifically provided in section 7, and shall not be conditioned upon the performance or nonperformance by Eugene or any other Project Owner or the Participant or any other Participant under this or any other agreement or instrument.
 - 6. Payment by the Participant.
- (a) Not less than 45 days prior to the beginning of each Contract Year, or whenever the Annual Budget for such Contract Year is amended, Eugene shall prepare and deliver to the Participant and the Administrator a Billing Statement showing the amount to be paid by the Participant for such Contract Year.

If at any time during a Contract Year, the Participant's Share changes from that used in preparing the Billing Statement for that Contract Year, an amended Billing Statement shall be prepared for the remainder of that Contract Year reflecting any amount over or

under billed due to such changes and shall be so litted to the Participant and the Administrator.

(b) The Participant shall pay to Eugene each Contract Year the amount specified in the Billing Statement submitted pursuant to subsection (a) above. Such payments shall be made in the manner specified below.

The Participant shall pay to Eugene in each month during a Contract Year the amount by which the net billing credits and cash payments theretofore received from the Administrator by the Participant for that Contract Year pursuant to section 7 exceed the sum of the Participant's previous payments to Eugene for that Contract Year until the full amount specified in the Billing Statement has been paid; provided, however, that in any event the Participant shall pay by the end of the last month in that Contract Year the amount, if any, by which the amount specified in the Billing Statement exceeds the total of the monthly amounts previously paid to Eugene by the Participant during such Contract Year.

Each such payment shall be made on or before the thirtieth day after (1) the date on each of the Administrator's bills to the Participant which reflect a credit to the Participant for such Contract Year pursuant to section 7(a), or (2) the date that payment is received from the Administrator pursuant to section 7(c). Amounts due and not paid by the Participant on or before the close of business of such thirtieth day shall bear an additional charge of two percent of the unpaid amount. Thereafter a further charge of one percent of the initial amount remaining unpaid shall be added on the first day of each succeeding calendar month until the amount due is paid in full.

Remittances received by mail will be accept without assessment of the delayed payment charges referred to above if the postmark indicates that payment was mailed on or before the thirtieth day after the date of the bill. If the thirtieth day after the date of the bill is a Sunday or other nonbusiness day of the Participant, the next following business day shall be the last day on which payment may be mailed without addition of the delayed payment charge.

- 7. Payment by the Administrator.
- (a) For each Contract Year the Administrator shall pay to the Participant an amount equal to the amount set forth in the Billing Statement for that Contract Year. The Administrator's payments shall be effected by means of credits against the Administrator's monthly billings to the Participant under the Participant's Bonneville Contracts, as follows:
 - agreement under which the Administrator is obligated to make payments to the Participant: In the month preceding each such Contract Year the Administrator shall allow a billing credit to the Participant in the full amount of the Administrator's billings in that month under the Participant's Bonneville Contracts, which credit shall be offset against the said billings. A billing credit computed in the same manner shall be allowed in each of the succeeding months (except the last) in that Contract Year until the full amount owed by the Administrator for that Contract Year has been offset against the Administrator's billings to the Participant.
 - (2) For Contract Years in which there are two or more agreements under which the Administrator is obligated to

make payments t .he Participant: In the .th preceding each such Contract Year and in each of the succeeding months (except the last) in that Contract Year the Participant's billing credits under this agreement shall be offset in the manner specified in (1) above against the payments due from the Administrator under all of the Participant's agreements under which the Administrator is obligated to make payments to the Participant, in the proportion that the amount specified in the Billing Statement bears to the sum of the amounts to be paid by the Administrator under all of such agreements for that Contract Year.

The total of the offsets allowed to the Participant hereunder for each Contract Year shall not exceed the sum of (1) the amount specified in the Billing Statement for that year and (2) any amount paid by the Participant for a prior Contract Year which the Administrator has not previously paid to the Participant pursuant to this Agreement.

"Participant's Bonneville Contracts" as used in this section means all contracts between the Participant and the Administrator which require payments by the Participant to the Administrator for sales and exchanges of power, operation and maintenance of facilities, use of transmission facilities, and emergency and standby power.

(b) If for any Contract Year the Administrator determines that the dollar obligations due the Administrator from the Participant referred to in subsection (a) above are or are expected to be insufficient to offset the Administrator's dollar obligations to such Participant pursuant to subsection (a) above, and are

expected to remain i. Afficient for a significal period, the Administrator shall use his best efforts to arrange for assignment of all or a portion of the Participant's Share and the associated benefits and obligations (subject to the prior assignment of the Participant's Share to the Administrator hereunder) to another customer or customers of the Administrator for all or a portion of the remaining term of this agreement to the extent required to eliminate the insufficiency, and the Participant shall make the assignment so arranged. The other Participants shall have first right to accept such assignment, pro rata among those exercising such right, before an assignment is made to a customer who is not one of the Participants. If the Administrator is unable to arrange for such assignment, the Participant shall make such assignment to the other Participants pro rata pursuant to the counterparts of subsection (f) of this section in the other Net Billing Agreements.

- (c) If (1) assignments pursuant to subsection (b) cannot be made in amounts sufficient to bring into balance the respective dollar obligations of the Administrator and the Participant, and (2) an accumulated balance in favor of the Participant from a previous Contract Year is expected by the Administrator to be carried for an additional Contract Year, such balance and any subsequent monthly net balances that cannot be net billed shall be paid in cash to the Participant by the Administrator, subject to the availability of appropriations for such purposes.
- (d) The Administrator and the Participant shall not enter into any agreements providing for payments to the Participant which the Administrator estimates will cause the aggregate of his

billings to the Part__ipant to be less than 115. If the Administrator's net billing obligations to the Participant under all agreements providing for net billing.

- (e) In the event that all or a portion of the Participant's Share shall be assigned pursuant to this section 7, the Participant shall nevertheless remain liable to Eugene to pay the purchase price for the Participant's Share in accordance with section 5(a) as if such assignment had not been made, and such liability of the Participant shall be discharged only to the extent that the assignee of the portion of the Participant's Share so assigned shall pay to Eugene the purchase price for the portion of the Participant's Share so assigned in accordance with the provisions of this agreement. Eugene may commence such suits, actions or proceedings, at law or in equity, including suits for specific performance, as may be necessary or appropriate to enforce the obligations of the Participant with respect to such liability.
- (f) If assignments pursuant to the counterparts in the other
 Net Billing Agreements of subsection (b) of this section cannot be
 made in amounts sufficient to balance dollar obligations of the Administrator and any other Participant, the Participant shall accept
 on a pro rata basis with other Participants, assignment of a portion
 of such other Participant's Share, to the extent required to eliminate such insufficiency, for all or a portion of the remaining term
 of this agreement; provided, however, that the sum of such assignments
 to the Participant pursuant to this subsection shall not without the
 consent of the Participant exceed an accumulated maximum of 25 percent
 of the Participant's Share specified in Exhibit A, as adjusted
 through the Date of Commercial Operation, nor shall any such assignment pursuant to this subsection cause the estimate of the payments

exceed the estimate of the Administrator's billings to the Participant for each Contract Year during the period of such assignment, both such estimates to be made by the Administrator.

- (g) The estimates by the Administrator under this agreement of billing credits and of the payments to be made by the Participant and the Administrator giving rise to such credits shall be conclusive.
- 8. Scheduling. Beginning on the Date of Commercial Operation and for the remainder of the term hereof, the Administrator may schedule and Eugene shall generate each hour the amounts of electric energy from the Project in amounts up to the Participant's Share for such hour in accordance with the Project Agreement. If pursuant to section 9(a) the Participant elects to use all or a portion of its Participant's Share, the amounts which the Administrator may schedule shall be appropriately reduced and the Participant may thereafter similarly schedule through Eugene in accordance with the Project Agreement for all or the portion of its Participant's Share it has so elected to use.
 - 9. Participant's Right to Use Project Capability.
- (a) If the Administrator is unable to satisfy his obligation to the Participant by net billing, assignment or cash payment pursuant to section 7, and the Administrator determines that this inability will continue for a significant period, the Participant may elect to direct that all or a portion of the energy associated with its Participant's Share be delivered by Eugene for the Participant's account at the point of delivery specified in section 11, either for the expected period of such inability or for the remainder of the term hereof. The period during which such delivery is to

be made shall be specified by the Participant a. We time it elects to have such energy delivered to it. The amount of such delivery shall be limited to the amount of the Participant's Share for which payment cannot be made, at the time the Participant elects to have such delivery made to it, by net billing with the Participant or assignees or by direct payment by the Administrator hereunder. The Participant's obligations to assign its Participant's Share to the Administrator and the Administrator's obligations to acquire such share and to make payments to the Participant under this agreement shall then be appropriately modified. The Administrator's prior obligations to the Participant not previously liquidated pursuant to the terms of section 7 shall be preserved until satisfied.

- (b) If the Participant elects to withdraw all or a portion of its Participant's Share as provided in this section, the Administrator will transmit such share to any point(s) of delivery on the Administrator's transmission system designated by the Participant that the Administrator determines such share can be made available, and will provide forced outage reserves for such share, under the same terms and conditions as provided in contracts for similar service then being offered to other utilities in the Pacific Northwest owning interests in large thermal projects.
 - 10. Termination Settlements.
- (a) If Eugene is unable to participate in ownership, construction, or operation of the Project due to licensing, financing, construction or operating conditions which are beyond its control, or if Eugene is in default as defined in the Project Agreement and has been requested by the Administrator to give notice of termination, or if the Project Owners invoke the End of the Project procedure in

section 24 of the Pro at Agreement, Eugene shall live notice of termination of this Agreement effective on the date of such notice. Eugene shall terminate its activities related to construction and operation of the Project, and shall undertake the salvage, discontinuance, decommissioning and disposition or sale of Eugene's ownership interest in the Project, all in accordance with the Project Agreement. Thereafter Eugene shall make monthly accountings to the Administrator and the Participant of all costs associated therewith. Such monthly accountings shall continue until all Project Bonds have been paid or funds set aside for the payment or retirement thereof in accordance with the Project Bond Resolution, at which time a final accounting shall be made by Eugene. Such costs of salvage, discontinuance, decommissioning and disposition or sale shall include, but shall not be limited to, all of Eugene's accrued costs resulting from Eugene's ownership, construction, operation (including cost of fuel) and maintenance of and renewals and replacements to the Project, all of Eugene's costs resulting from Eugene's ownership of the Project and the dismantling thereof, and all amounts which Eugene is required under the Project Bond Resolution to pay in each year into the various funds provided in the Project Bond Resolution for debt service and all other purposes until the date that all of the Project Bonds have been paid or funds set aside for the payment or retirement thereof in accordance with the Project Bond Resolution.

The monthly accountings shall credit against such costs all amounts received by Eugene from the disposition of Project assets.

The final accounting shall credit the fair market value of any assets related to the Project then retained by Eugene. If the monthly or final accountings show that such costs exceed such credits, the

Participant shall pa, agene at times reasonably reed upon the sum determined by multiplying the excess by the Participant's Percentage. In any case such payments shall be made at times and in amounts sufficient to cover on a current basis the Participant's Percentage of the amount which Eugene is required under the Project Bond Resolution to pay in each year into the various funds provided in the Project Bond Resolution for debt service and all other purposes. If the monthly or final accountings show that such credits exceed such costs, Eugene shall pay to the Administrator and the Participant as their interests may appear and at times reasonably agreed upon an amount determined by multiplying such excess by the Participant's Percentage, together with interest as determined in section 5(b).

(b) Within ninety days after termination of this agreement pursuant to section 3(b) Eugene shall make a final accounting to the Participant and the Administrator of the actual costs for Eugene's Ownership Share of the Project applicable to the last Contract Year. The Participant shall pay to Eugene within ninety days after it receives such final accounting its Participant's Percentage for such Contract Year of the amount, if any, by which such actual costs exceeded the Annual Budget for such Contract Year after crediting the Participant for its proportionate share of any Prepaid Costs relating to the part withdrawn and applicable to such part after the date of withdrawal, for which the Participant had paid a proportionate share under Annual Budgets for previous Contract Years. If Eugene's actual costs related to the Participant's Share, after so crediting the Participant, are less than the amount paid by the Participant in such Contract Year, Eugene shall pay any excess,

with interest as det ined in section 5(b), to Administrator and the Participant as their interests may appear within a reasonable time after such final accounting is made.

- (c) The Administrator shall pay the Participant the amounts, if any, paid by the Participant to Eugene for the portion of the Participant's Share then assigned to the Administrator pursuant to this section. Such amounts shall be paid in the manner specified in section 7 at such times as the parties agree.
- (d) The provisions of sections 10(a), 10(c) and 10(d) and the provisions of sections 5(a) and 5(c) describing the circumstances under which payments are to be made pursuant to this section 10 and the provisions of section 13 shall remain in effect notwithstanding the termination of this agreement pursuant to section 3(c). The provisions of sections 10(b), 10(c) and 10(d) shall remain in effect notwithstanding the termination of this agreement pursuant to section 3(b).
- power and energy to the Administrator shall be made at the point of delivery and at the approximate voltage described below. Such electric power and energy shall be in the form of three-phase current, alternating at a frequency of approximately 60 Herts. Amounts so delivered at such point during each month shall be determined from measurements made by Project meters, installed to record such deliveries at the place and in the circuits hereinafter specified:

TROJAN POINT OF DELIVERY:

Location: the point in the Trojan substation where the 230 kv facilities of the Administrator and the Project will be connected;

Voltage: 230 kv;

Metering: in t... 230 kv circuits over which such electric power and energy will flow;

Obligations in the Event of Default. The Participant's Share purchased by the Participant from Eugene and assigned by the Participant to the Administrator under this agreement shall be automatically increased for the remaining term of this agreement pro rata with that of other nondefaulting Participants in the event and to the extent that one or more of the Participants is unable, or fails or refuses for any reason, to perform its obligations under its Net Billing Agreement, and the Participant's Share of the defaulting Participant shall be reduced correspondingly; provided, however, that the sum of such increases for the Participant pursuant to this subsection shall not, without the consent of the Participant, exceed an accumulated maximum of 25 percent of the Participant's Share specified in Exhibit A, as adjusted through the Date of Commercial Operation, nor shall any such increase pursuant to this subsection cause the estimate of the payments to be made by the Participant to Eugene under this agreement to exceed the estimate of the Administrator's billings to the Participant during the period of such increase. Both such estimates shall be made by the Administrator and shall be conclusive.

In the event the Participant shall fail or refuse to pay any amounts due to Eugene hereunder, the fact that the other Participants have assumed the obligation to make such payments shall not relieve the Participant of its liability for such payments, and Eugene and the Participants assuming such obligation, either individually or as a member of a group, shall have a right of recovery from the Participant, and Eugene or any Participant as their interests may appear, jointly or severally, may commence such suits, actions

or proceedings, at or in equity, including as for specific performance, as may be necessary or appropriate to enforce the obligations of this agreement against the Participant under this subsection.

13. Sources of Participant's Payments. The Participant shall not be required to make payments to Eugene under this agreement except from the revenues derived by the Participant from the ownership and operation of its electric utility properties and from payments made by the Administrator under this agreement.

The Participant covenants and agrees that it will establish, maintain and collect rates or charges for power and energy and other services, facilities and commodities sold, furnished or supplied by it through any of its electric utility properties which shall be adequate to provide revenues sufficient to enable the Participant to make the payments to be made by the Participant to Eugene under this agreement and to pay all other charges and obligations of the Participant payable from or constituting a charge and lien upon such revenues.

- 14. Modification and Uniformity of Agreement.
- (a) This agreement shall not be binding upon any of the parties hereto if it is not binding upon all of the parties hereto, but this agreement shall not be subject to termination by any party under any circumstances, whether based upon the default of any other party under this agreement, or any other instrument, or otherwise, except as specifically provided in this agreement.
- (b) This agreement shall not be amended, modified, or otherwise changed by agreement of the parties in any manner that will impair or adversely affect the security, afforded by the provisions of this agreement, for the payment of the principal, interest, and

premium, if any, on the Project Bonds as they is pectively become payable so long as any of the Project Bonds are outstanding and unpaid or funds are not set aside for the payment or retirement thereof in accordance with the Project Bond Resolution.

- (c) If any Net Billing Agreement is changed so that it contains terms and conditions different from those contained in this agreement the Administrator shall notify the Participant and upon timely request by the Participant, the parties shall amend this agreement to include similar changes.
- 15. Assignment of Agreement. This agreement shall inure to the benefit of and shall be binding upon the respective successors and assigns of the parties to this agreement; provided, however, that, except as provided in sections 7, 9 and 12 hereof, neither this agreement nor any interest therein shall be transferred or assigned by:
- (a) Eugene to any entity other than the United States or an agency thereof without written consent of the Administrator and the Participant;
- (b) the Administrator to any party other than the United States or an agency thereof without written consent of Eugene and the Participant;
- (c) the Participant without written consent of Eugene and the Administrator.

Such consent will not be unreasonably withheld. No assignment or transfer of this agreement shall relieve the parties of any obligation hereunder.

16. Approval by Rural Electrification Administrator. If the Participant is a party to an agreement or other instrument pursuant

to which approval of Lais agreement by the Administrator of the Rural Electrification Administration is required as listed in Exhibit A, this agreement shall not be binding upon any of the parties hereto until it shall have been approved by him or his delegate.

- 17. Information and Representation for the Participants.
- (a) Eugene shall make available to the Participant all information pertinent to the construction and operation of the Project and in excercising any rights and duties associated with its cotenancy in ownership in the Project shall take cognizance of the interests of the Participant. The proposed annual operating budget to be adopted by the Project Owners under the Project Agreement shall be sent to the Participant. Eugene shall not approve such budget or adopt the Annual Budget or fuel management plan regarding the Project until the Participant has had 15 days to review and submit to Eugene and the Administrator any recommendations it may have regarding such budget or fuel management plan.

Eugene shall make available to the Public Power Council (or, if the Public Power Council ceases to exist, to such other agency or agencies as the Administrator designates as representative of such customers or groups thereof) copies of each communication or other document sent to the Participant pursuant to this subsection. Said copies shall be supplied in reasonable quantity and simultaneously with their transmittal to Participants.

(b) The Participants shall have the right to designate a representative to attend, as an observer, meetings of the Engineering and Operating Committees established pursuant to the Project Agreement. Eugene shall arrange for timely notice to each such representative of any meetings of such committees.

18. Applicability of Other Agreements and Instruments. It is recognized by the parties hereto that Eugene in the ownership, construction and operation of the Project must comply with the requirements of the Project Agreement, the Project Bond Resolution and all licenses, permits and regulatory approvals necessary for such ownership, construction and operation, and it is, therefore, accordingly agreed that this agreement is made, and arbitration hereunder shall be, subject to the terms and provisions of the Project Agreement, the Project Bond Resolution and all such licenses, permits and regulatory approvals.

IN WITNESS WHEREOF, the parties hereto have executed this agreement in several counterparts.

(SEAL)

UNITED STATES OF AMERICA Department of the Interior

 $\mathbf{B}\mathbf{y}$

Ineville Power Administrator

THE CITY OF EUGENE, OREGON
By and Through Eugene Water
& Electric Board

Bv

(SEAL)

ATTEST:

THE CLTY OF CANBY, OREGON

(SEAL)

ATTEST:

EXHIBIT A

Table of Participants and Participant's Share 1/

<u>Participant</u>	Participant's Share 1/
*Blachly-Lane County Cooperative Electric Association	0.006
City of Canby, Oregon	0.005
Clatskanie Peoples' Utility District	0.054
*Consumers Power, Inc.	0.011
City of Eugene, Oregon	0.145
City of Forest Grove, Oregon	0.009
*Lincoln Electric Cooperative (Washington)	0.006
City of McMinnville, Oregon	0.010
City of Monmouth, Oregon	0.005
Northern Wasco Peoples' Utility District	0.003
Salem Electric	0.016
City of Springfield, Oregon	0.018
*Umatilla Electric Cooperative Association	0.010
*West Oregon Electric Cooperative	0.002
	0.300

^{*}Approval of Agreement by Rural Electrification Administration required.

If Eugene's Ownership Share is adjusted pursuant to sections 2(b), 2(c), 16 or 17 of the Project Agreement, the Participant's Share for each Participant shall thereupon be adjusted to the decimal expression (rounded to the nearest ten thousandth) of the fraction in which the denominator is Eugene's Ownership Share prior to such adjustment and the numerator is Eugene's Ownership Share following such adjustment times the Participant's Share prior to such adjustment; provided, however, the Participant's Share shall not be increased above the amount specified in this exhibit pursuant to this adjustment without the written consent of the Participant and the Administrator.

PORTLAND GENERAL ELECTRIC COMPANY

TROJAN NUCLEAR POWER PLANT

Description of Project

ABSTRACT

The Trojan Nuclear Plant will be located in Columbia County in Northwest Oregon on the Columbia River between St. Helens and Rainier, Oregon. The site consists of approximately 623 acres.

The pressurized water reactor nuclear steam supply system on order is rated at 3423 thermal megawatts and provides saturated steam to a turbine generator. The steam turbine will be a tandem-compound, six flow, 1800-rpm unit with 38-inch blades in the exhaust stages. Two combination moisture separator, two-stage reheater units are to be used to dry and superheat the steam from the double flow high pressure elements before expansion in the three double flow low pressure elements. Turbine exhaust steam will be condensed in a triple pressure triple shell surface condenser of the deaerating type. Condenser cooling water will be furnished by two half-capacity circulating water pumps from a natural draft cooling tower. The regenerative feedwater heating system will include two half-capacity condensate pumps, two half-capacity steam turbine driven feedwater pumps and seven stages of feedwater heating. The main generator will be a 1292.6 mva, 0.9 pf, 22,000 v, 3-phase, 60-Hertz, 1800 rpm hydrogen- and water-cooled unit. The power will be delivered to the transmission system through four 230-kv lines terminating in three separate substations.

The plant will have the following power sources for the electrical system:

- a. Four 230-kv lines which terminate at the Trojan Plant switchyard will provide startup and the preferred source for the auxiliary system through two 230/12-kv transformers. In addition, a second connection to the switchyard will be available through the main and unit auxiliary transformer.
- b. Two standby diesel generators connected to separate 4160-volt buses.
- c. Two 125-volt and one 250-volt station batteries.

Nuclear Steam Supply System

The Nuclear Steam Supply System will be a Westinghouse pressurized water reactor. The design and license application rating is for a power output of 3423 mw thermal. The equivalent warranted annual average gross and approximate net electrical outputs of the plant are 1151 and 1106 mw, respectively. The nuclear reactor is expected to be ultimately capable of an output of approximately 3570 mwt which would correspond to the valves-wide-open average annual rating of the turbine generator of 1198 and 1153 mw electric gross and net, respectively. All plant safety systems, including containment and engineered safety features, are designed for operation at the higher power level.

The reactor will be fueled with a three-region cycled core. The initial core will contain 215,800 pounds of uranium dioxide with an average enrichment of about 2.6%. Reload batches will have an enrichment of approximately 3.2%.

The fuel rods are to be cold worked Zircaloy tubes containing slightly enriched uranium dioxide fuel. The fuel assembly will be a canless type with the basic assembly consisting of the Rod Cluster Control (RCC) guide thimbles welded to the grids at the top and bottom nozzles. The fuel rods will be held by the spring clip grids in this assembly. The internals, consisting of the upper and lower core support structure, are designed to support, align, and guide the core components, direct the coolant flow to and from the core components, and to support and guide the in-core instrumentation. Orificing will be used to improve core flow distribution. Dissolved boric acid is to be used as a reactivity control device to minimize the use of RCC assemblies and assist control of power peaking.

Full length and part length RCC assemblies and consumable neutron absorber rods will be inserted into the guide thimbles of the fuel assemblies. The absorber sections of the control rods are to be fabricated of boron carbide pellets sealed in stainless steel tubes. The absorber material in the fixed rods will be in the form of borosilicate glass sealed in stainless steel tubes. The control rod drive mechanisms for the full length RCC assemblies will be of the magnetic latch type. The latches are to be controlled by three magnetic coils. They are so designed that upon a loss of power to the coils, the RCC assembly is released and falls into the core by gravity to shut down the reactor. The mechanisms for the part length RCC assemblies, which will be normally in the core, are to be of a roller nut type mechanism which move at slow speed and stop motion on loss of power.

Reactor Coolant System

The Reactor Coolant System will consist of four similar heat transfer loops connected in parallel to the reactor vessel. Each

loop will contain a steam generator, a pump, loop piping, and instrumentation. The pressurizer surge line is to be connected to one of the loops. Auxiliary system piping connections into the reactor coolant piping are to be provided as necessary.

Pressure in the system will be controlled by the pressurizer at 2235 psig. System pressure is to be maintained through the use of electrical heaters and sprays. Steam can either be formed by the heaters, or condensed by a pressurizer spray to minimize pressure variations due to contraction and expansion of the coolant. Spring-loaded steam safety valves and power-operated relief valves for overpressure protection will be connected to the pressurizer and discharge to the pressurizer relief tank, where the discharged steam is condensed and cooled by mixing with water.

Containment and Structures

The containment building will be a fully continuous reinforced concrete structure in the shape of a cylinder with a hemispherical roof and a flat foundation slab.

The cylindrical portion is to be prestressed by a post-tensioning system consisting of horizontal and vertical tendons. The dome will have a two-way post-tensioning system.

The foundation slab will be conventionally reinforced with highstrength reinforcing steel. A continuous access gallery is provided beneath the base slab for installation and inspection of vertical tendons. The inside face of the concrete shell will be steel lined for leak tightness. The base liner will be installed on top of the structural slab and is covered with concrete. The structure provides biological shielding for both normal and accident situations.

The containment building will completely enclose the reactor and reactor coolant system. It is designed for all credible conditions of loading, including normal loads, loads during loss-of-coolant accident, test loads, and loads due to adverse environmental conditions.

Engineered Safety Features

The engineered safety features of the Trojan plant include the means to retain fission products in the reactor coolant or containment. These products would come from clad leakage caused by reactor transients, faulty material or processing.

Engineered safety features will include the following systems:

The Emergency Core Cooling System will provide borated water to cool the core in the event of accidental depressurization of the Reactor Coolant System. It will include injection and recirculation features which protect against the full spectrum of reactor coolant system break sizes. Two centrifugal charging pumps will operate at high pressure, two centrifugal safety-injection pumps will operate at intermediate pressures, four pressurized accumulators inject coolant at lower pressures and two residual heat-removal pumps can provide large volumes of coolant at still lower pressures. Continued heat removal after an accident or shut down is also provided by these residual heat-removal pumps and their associated heat exchangers.

The <u>Containment Spray System</u> will be used to reduce containment pressure and remove iodine from the containment atmosphere. A chemical additive, sodium hydroxide, is to be used to assist in halogen removal.

Instrumentation and Control

Instrumentation and controls essential to avoid undue risk to the health and safety of the public are to be provided to monitor and maintain essential reactor facility operating variables such as neutron flux, primary coolant pressure, temperature, and control rod positions within prescribed operating ranges.

The control system will enable the nuclear plant to accept a stepload increase of 10% and a ramp increase of 5% per minute within the load range of 15% to 100% of nominal power. The control system will also take a stepped load decrease from 100% to 15% of power without tripping the reactor.

Auxiliary Systems

The Auxiliary Systems are required to ensure the safe operation or servicing of the Reactor Coolant System. These systems are:

The Chemical and Volume Control System will provide for neutron absorber fluid injection, chemical additions for corrosion control, reactor coolant cleanup, reprocessing of water letdown from The Reactor Coolant System, and reactor coolant pump seal water injection.

The Residual Heat Removal System will remove residual and sensible heat from the core and reduce the temperature of Reactor Coolant System during plant cooldown when heat removal by means of steam generation becomes inefficient.

The Spent Fuel Pool Cooling and Cleanup System will remove from the spent fuel pool the heat generated by stored spent fuel elements, maintain spent fuel pool water in clean and clear conditions and will have facilities for removing ionic impurities which may enter the water from spent fuel elements.

The Component Cooling System will remove residual and sensible heat from Reactor Coolant System, via the Residual Heat Removal System, during plant cooldown, will cool the spent fuel pool water and the letdown flow to the Chemical and Volume Control System during power operation and provide cooling to dissipate waste heat from various primary plant components and equipment bearings.

Sampling System. This system will provide the equipment necessary to obtain liquid and gaseous samples from the various reactor plant systems.

Service Systems. These systems include Fire Protection, Circulating and Service Water Systems, Auxiliary Feedwater, Compressed Air and Auxiliary Building Heating and Ventilation Systems.

Reactor Components and Fuel Handling System. This system provides for handling fuel assemblies, control rod assemblies, and core structural components.

Radioactive Wastes

The radioactive waste treatment systems are designed to collect, store, process, and monitor the solid, liquid and gaseous wastes which are radioactive or potentially radioactive.

Main Steam System

Saturated steam from the four steam-generators will be conveyed through the containment wall by four main steam lines to four turbine stop valves. Each main steam line will be provided with atmospheric dump valves and spring-loaded relief valves between the containment penetration and the corresponding turbine stop valve. The spring-loaded relief valves discharge to the atmosphere and will be in accordance with the requirements of the ASME Boiler and Pressure Vessel Code, Section VIII. The main steam lines will also supply high pressure steam at low loads to the steam-generator feed pump turbine drivers. Steam supply to the feed pump turbine drivers, under normal operating conditions, will be from the cross-over steam lines from the high pressure to the low pressure turbine. Bypass connections to the condenser will be located on the main steam lines upstream of the turbine stop valves. The main steam lines also supply steam to the steam jet air ejectors and to the second stage of the reheaters.

The main steam bypass system is designed to pass 40% of the full load main steam flow directly to the condenser. The atmospheric steam dump system is designed to handle 45% of the full load main steam flow. These two systems can operate simultaneously in case of a turbine trip from full load operation to prevent tripping of the reactor. The purpose of this is to increase the availability of the unit.

Self-actuated spring-loaded safety valves will protect against overpressure of the steam-generator and main steam piping under all conditions. These valves are designed to pass 100% of the maximum calculated steam-generator capacity.

Turbine Generator

The General Electric turbine (designated TC6F-38) will be a four casing, tandem-compound, six flow exhaust, 1800 rpm unit with 38-inch last stage blades. It is designed for initial steam conditions of 835 psia and 522° F, while operating at a back pressure of 2.13/2.93/3.98 inches of mercury absolute.

The turbine will consist of one double-flow high-pressure element in tandem with three double-flow low-pressure elements. Moisture separation and reheating of the steam will be provided between the high-pressure and low-pressure elements, with two horizontal-axis, cylindrical-shell, combined moisture separator, reheater assemblies. One assembly is to be located on each side of the low-pressure turbine elements.

Turbine-generator bearings will be lubricated by a conventional pressurized lube oil system, the main lube oil pump being driven from the turbine rotor during normal operation. During start-up or shutdown, ac motor-driven pumps supply bearing oil to the turbine-generator. A dc motor-driven backup pump is provided in case of loss of ac power.

Condensate and Feedwater Systems

After leaving the low-pressure turbines, the steam will exhaust into a triple-shell condenser. The main condensing surface is to be mounted beneath the low-pressure turbine elements in three shells. The tubes will be arranged transverse to the turbine shaft. Sufficient surface is to be provided to condense turbine exhaust flow at maximum load. This is also adequate to condense turbine bypass steam (up to 40% of full load main steam flow) following a load rejection, or under controlled start-up conditions, or during residual heat removal at shutdown.

The condenser hotwell is sized to provide a total water storage equivalent to that required for four minutes' operation at maximum load.

Condensate will be pumped through the steam jet air ejector condensers, and through five stages of low-pressure feedwater heaters to the feedwater pump suction. The water discharged from the feedwater pumps will flow through the two stages of high-pressure feedwater heaters into the steam-generators.

An auxiliary feedwater system will supply water to the steamgenerators for start-up and also for reactor residual heat removal
during plant cooldown initiation if the normal feedwater sources
are unavailable because of loss of power or other malfunctions.
The unit is to be equipped with two motor-driven auxiliary feedwater pumps, which can receive power from both normal and off-site
auxiliary power sources. Both pumps can be provided with
emergency power from the diesel generators in the event of complete
loss of plant and off-site auxiliary power. Flows from either
auxiliary feedwater pump will provide sufficient flow to remove
reactor residual heat while maintaining water levels adequate to
prevent exposure of the steam-generator tube sheets.

Circulating Water System

Condenser circulating water will be cooled by a hyperbolic natural draft cooling tower. The total flow of the circulating water system will be approximately 350,000 gpm which will be pumped by two motor-driven circulating water pumps through two circulating water pipes to the condenser. The condenser will consist of three separate shells with the circulating water flowing through the shells in series. The circulating water will then return to the cooling tower. Makeup water to the cooling tower basin is supplied from the Columbia River through the makeup water system. A chlorinating facility is provided for algae and slime control. Provision for addition of other chemicals for control of water chemistry will be provided as required. Cooling tower blowdown will be diluted and discharged to the Columbia River in accordance with applicable regulations.

Cooling water supply to the turbine-generator auxiliary equipment and feedwater turbine drives auxiliary equipment will be from the circulating water pump discharge lines.

Electrical Systems

The main generator will be a 1292.6 mva, 0.9 pf, 22,000 v, 3-phase, 60 Hz, 1800-rpm hydrogen- and water-cooled unit. The power will

be delivered to the transmission system through four 230-kv lines terminating in three separate substations.

The plant will have three separate sources of power for its auxiliaries:

- a. Its own generator, which will continue to supply the auxiliary load if the plant should become isolated.
- b. Two startup transformers that can be supplied by any one of the four 230-kv lines.
- c. Two fast-starting diesel generators connected to two independent buses. Upon loss of all outside power, each of the diesel generators and its associated bus can shut the plant down safely.

Station batteries will be provided to insure a constant supply of power to vital instruments and controls.

The station power will be distributed through redundant buses at 12,470, 4160, 480, 120/208 and 120-volt ac buses and load centers and through redundant 125- and 250-volt dc buses.

Railroad

A railroad spur track will connect the plant site from the railroad owned by the Spokane, Portland and Seattle Railroad. The spur will be a single track with switching facilities at the common carrier connection and necessary on-site track at the plant. It is expected that the reactor vessel will be landed from a barge by use of a temporary barge unloading facility to be constructed at the site. Additional heavy material and equipment may also be handled in this manner.

PROVISIONS REQUIRED BY STATUTE OR EXECUTIVE ORDER

1. Contract Work Hours and Safety Standards.

This contract, to the extent that it is of a character specified in the Contract Work Hours and Safety Standards Act (Public Law 87-581, 76 Stat. 357-360, as amended) and is not covered by the Walsh-Healey Public Contracts Act (41 U. S. C. 35-45), is subject to the following provisions and to all other provisions and exceptions of said Contract Work Hours and Safety Standards Act.

- (a) No Contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any laborer or mechanic in any workweek in which he is employed on such work, to work in excess of eight hours in any calendar day or in excess of forty hours in any workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times his basic rate of pay for all hours worked in excess of eight hours in any calendar day or in excess of forty hours in such workweek, whichever is the greater number of overtime hours.
- (b) In the event of any violation of the provisions of subsection (a), the Contractor and any subcontractor responsible for such violation shall be liable to any affected employee for his unpaid wages. In addition, such Contractor or subcontractor shall be liable to the United States for liquidated damages. Such liquidated damages shall be computed, with respect to each individual laborer or mechanic employed in violation of the provisions of subsection (a), in the sum of \$10 for each calendar day on which such employee was required or permitted to work in excess of eight hours or in excess of forty hours in a workweek without payment of the required overtime wages.
- (c) The Administrator may withhold, or cause to be withheld, from any moneys payable on account of work performed by the Contractor or subcontractor, the full amount of wages required by this contract and such sums as may administratively be determined to be necessary to satisfy any liabilities of such Contractor or subcontractor for liquidated damages as provided in subsection (b).
- (d) No contractor or subcontractor contracting for any part of the contract work shall require any laborer or mechanic employed in the performance of the contract to work in surroundings or under working conditions which are unsanitary, hazardous, or dangerous to his health or safety, as determined under construction safety and health standards promulgated by the Secretary of Labor by regulation based on proceedings pursuant to section 553 of title 5, United States Code, provided that such proceedings include a hearing of the nature authorized by said section.

- (e) The Co actor shall require the 1 going subsections (a), (b), (c), (d) and this subsection (e) to be inserted in all subcontracts.
- (f) The Contractor shall keep and maintain for a period of three (3) years from the completion of this contract the information required by 29 CFR 8 516.2(a). Such material shall be made available for inspection by authorized representatives of the Government, upon their request, at reasonable times during the normal work day.
- 2. Convict Labor. The Contractor shall not employ any person undergoing sentence of imprisonment at hard labor.
- 3. Equal Opportunity. Unless exempted pursuant to the provisions of Executive Order 11246 of September 24, 1965 and the rules, regulations and relevant orders of the Secretary of Labor thereunder, during the performance of this contract, the Contractor agrees as follows:
- (a) The Contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin. The Contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, color, religion, sex, or national origin. Such action shall include, but not be limited to, the following: employment, upgrading, demotion or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation and selection for training, including apprenticeship. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided by the Administrator setting forth the provisions of this equal opportunity clause.
- (b) The Contractor will, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, or national origin.
- (c) The Contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice, to be provided by the Administrator, advising the labor union or worker's representative of the Contractor's commitments under this equal opportunity clause and shall post copies of the notice in conspicuous places available to employees and applicants for employment.
- (d) The Contractor will comply with all provisions of Executive Order No. 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.
- (e) The Contractor will furnish all information and reports required by Executive Order No. 11246 of September 24, 1965, and by the rules, regulations, and orders of the Secretary of Labor,

or pursuant thereto, and will permit access to his books, records, and accounts by the Administrator and the Secretary of Labor for purposes of investigations to ascertain compliance with such rules, regulations and orders.

- (f) In the event of the Contractor's noncompliance with the equal opportunity clause of this contract or with any of such rules, regulations, or orders, this contract may be cancelled, terminated, or suspended in whole or in part and the Contractor may be declared ineligible for further Government contracts in accordance with procedures authorized in Executive Order No. 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order No. 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.
- (g) The Contractor will include the provisions of paragraphs (a) through (g) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to Section 204 of Executive Order No. 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The Contractor will take such action with respect to any subcontract or purchase order as the Administrator may direct as a means of enforcing such provisions including sanctions for noncompliance; provided, however, that in the event the Contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the Administrator, the Contractor may request the United States to enter into such litigation to protect the interests of the United States.
- 4. Interest of Member of Congress. No Member of or Delegate to Congress, or Resident Commissioner shall be admitted to any share or part of this contract or to any benefit that may arise therefrom. Nothing, however, herein contained shall be construed to extend to such contract if made with a corporation for its general benefit.