City of Portland, Oregon

to

United States National Bank of Oregon

Portland, Oregon

As Trustee

Supplemental Trust Indenture

Dated as of September 1, 1980

Hydroelectric Power Revenue Bonds, Series B

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(This Table of Contents is not a part of the Supplemental Trust Indenture but for convenience of reference only.)

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SUPPLEMENTAL TRUST INDENTURE

THIS INDENTURE is made as of the first day of September, 1980, between the CITY OF PORTLAND, OREGON, a municipal corporation of the State of Oregon (the "City"), and United States National Bank of Oregon, Portland, Oregon, a national banking association duly organized, existing and authorized to accept and execute trusts of the character herein set out, under and by virtue of the laws of the United States of America, having its principal place of business in the City of Portland, Oregon, as Trustee (the "Trustee").

RECITALS:

The City is a municipal corporation operating under and pursuant to its City Charter recodified in 1942 and amended from time to time thereafter.

The City has full power and is duly authorized by law to issue and sell its obligations for its lawful municipal purposes. The City has issued an initial series of Bonds, designated "City of Portland, Oregon Hydroelectric Power Revenue Bonds" (the "Initial Bonds") in the aggregate principal amount of \$38,000,000, in order to provide funds to finance part of hydroelectric power generating facilities on the Bull Run River in Multnomah and Clackamas Counties, Oregon (the "Project").

The City has determined to issue a second series of Bonds, designated "City of Portland, Oregon Hydroelectric Power Revenue Bonds, Series B" (the "Series B Bonds") in an aggregate principal amount of \$17,000,000, in order to provide funds to complete the Project, the costs of which have exceeded initial estimates therefor. The Bonds will be issued pursuant to and in accordance with the provisions of that certain Trust Indenture between the City and the Trustee, dated as of June 1, 1979 (the "Indenture"), specifically authorizing the issuance of additional bonds if needed to complete the Project.

The Series B Bonds, the interest coupons to be attached to the coupon Bonds of such series and the Trustee's certificate of authentication to be endorsed on all Series B Bonds shall be in the following forms with necessary and appropriate variations, omissions and insertions, as permitted or required by the Indenture or this Supplemental Indenture:

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[Form of Coupon Bond]

CITY OF PORTLAND, OREGON

HYDROELECTRIC POWER REVENUE BOND, SERIES B

No.

\$5,000

City of Portland, Oregon, a municipal corporation of the State of Oregon (the "City"), for value received, hereby promises to pay to the bearer, on the 1st day of October, 19____, the principal sum of

FIVE THOUSAND DOLLARS

in such coin or currency of the United States of America as at the time of payment shall be legal tender for public and private debts and to pay interest thereon in like coin or currency from the date hereof at the rate of percent (୫) per annum payable semiannually on the 1st days of April and October of each year beginning October 1, 1980, until such principal shall become due and payable, or if this Bond shall be duly called for redemption, until the redemption date, and to pay interest on any overdue principal and premium, if any, and (to the extent legally enforceable) on any overdue installment of interest at the rate aforesaid. Both principal of and interest on this Bond are payable, at the option of the holder thereof, at the principal office of United States National Bank of Oregon, Portland, Oregon (the "Trustee"), or at the principal office of the fiscal agent for the State of Oregon, New York, New York.

This Series B Bond is one of a duly authorized issue of bonds of the City known as "Hydroelectric Power Revenue Bonds, Series B" (the "Series B Bonds") in an aggregate principal amount not exceeding \$17,000,000. All of the Series B Bonds are issued under, and are equally and ratably secured as to principal, premium, if any, and interest by a Trust Indenture (the "Indenture"), dated as of June 1, 1979, executed by the City and Trustee, and by a Supplemental Trust Indenture thereto (the "Supplemental Indenture"), dated as of September 1, 1980, executed by the City and the Trustee, to which Indenture, Supplemental Indenture and all indentures supplemental thereto reference is hereby made for a description of the property thereby pledged, the nature and extent of the security thereby granted and a statement of the terms and conditions upon which the Series B Bonds are issued, the rights of the Bondholders and of the Trustee, the rights and obligations of the City and the indebtedness which is equally secured. Pursuant to the Indenture an initial series of the City's Hydroelectric Power Revenue Bonds was issued.

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As provided in said Indenture, bonds of other series ranking equally with the initial series of the City's Hydroelectric Power Revenue Bonds may be issued in order to complete the Project. Such bonds may vary in such manner as is provided and permitted in the Indenture. The Series B Bonds are issued for this purpose. All bonds from time to time outstanding under the terms of the Indenture and the Supplemental Indenture are hereinafter referred to as the "Bonds".

The City owns dams as part of its existing Bull Run Water Supply System that can be used as part of hydroelectric power generating facilities to be constructed out of Bond proceeds on the Bull Run River in Multnomah and Clackamas Counties, Oregon. The power generated therefrom shall be sold to Portland General Electric Company, an Oregon corporation (the "Purchaser") pursuant to a Power Sales Agreement between the City and the Purchaser.

This Bond and the interest thereon are payable solely from the gross revenues to the City from the Power Sales Agreement which are hereby pledged for that purpose as more fully described in the Indenture. The City shall in no event be liable for the payment of the principal of, premium or interest on the Bonds or for the performance of any pledge, obligation or agreement of any kind whatsoever of the Purchaser, and none of the Bonds or any of the Purchaser's agreements or obligations shall be construed to constitute an indebtedness of the said City within the meaning of any constitutional or statutory provision whatsoever.

As provided in, and to the extent permitted by, the Indenture, the Supplemental Indenture or any indenture supplemental thereto, the Indenture may be amended, altered, modified or supplemented by the City with the written consent of the Holders of 66-2/3% in principal amount of the Bonds then outstanding; provided, however, that no such modification shall effect the reduction of, or the extension of the stated time of payment of, the principal hereof or of the interest hereon or of any premium payable on the redemption hereof or change the percentage of Bondholders required to consent to any amendment, alteration, modification or supplement or deprive any Bondholder of the security afforded by the lien of the Indenture or change the rights and duties of the Trustee.

The Bonds may be redeemed at the option of the City on October 1, 1990, or on any interest payment date thereafter, in whole or in part, in inverse order of maturity, or for the purpose of refunding, in whole but not in part, as provided in the Indenture. The Bonds, when so redeemable, are redeemable at the principal amount of the Bonds to be redeemed and accrued interest thereon to the date of redemption, plus a premium expressed as a percentage of the principal amount of each Bond so redeemed,

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as shown below:

DATE

REDEMPTION PRICE

October 1, October 1, October 1, October 1, October 1, October 1,	1991 and 1992 and 1993 and 1994 and 1995 and	April 1, April 1, April 1, April 1, April 1, April 1,	1992 1993 1994 1995 1996	103 102 1/2 102 101 1/2 101 100 1/2 100	40 40 40 40 40
October 1,	1996 and	thereafte	r	100	8

The Bonds of any series may also be refunded and prepaid by the issuance of other Bonds under the Indenture or by advance refunding, all as provided in Section 3.04 of the Indenture. Also all outstanding Bonds may be advance refunded under the provisions of Article VIII of the Indenture and the Indenture may thereupon be discharged as provided in said Article VIII and the holders of outstanding Bonds shall thereafter be entitled to payment solely out of money or United States Government Securities (as defined in Article VIII) deposited with the Trustee in an amount sufficient to redeem Bonds when redeemable or at maturity, as the case may be.

The Bonds of any series are also redeemable out of proceeds received by the City from insurance and condemnation under certain conditions as provided in the Indenture. Should any act or omission to act of the Purchaser as defined in the Indenture result in interest on the Series B Bonds being includable in the gross taxable income of Bondholders, the Series B Bonds shall be immediately redeemable. In case of redemption in either such event, such redemption shall be at a price of 103% of principal amount if prior to October 1, 1990, and at par if on or after October 1, 1990. If Series B Bonds are not redeemed upon a determination that the interest thereon is taxable, the City shall pay interest on the Series B Bonds, from the date of such determination, at a rate of thirteen percent (13%) per annum or the maximum legal rate of interest if less than thirteen percent (13%).

As provided in the Indenture, notice of redemption (unless waived) shall be given by publication at least once in a newspaper of general circulation in the City of Portland, Oregon and in The Daily Bond Buyer (such publication to be not less than 30 nor more than 60 days before the redemption date). If any Bond called for redemption is fully registered, notice of redemption thereof shall also be mailed not less than 30 nor more than 60 days before the redemption date, to the registered owner of such Bond but neither failure to mail such notice nor any defect in the notice so mailed shall affect the sufficiency

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of the proceedings for redemption.

In case an event of default as defined in the Indenture shall occur, the principal of this Series B Bond may become or be declared to be due and payable in the manner and with the effect provided in the Indenture.

The Series B Bonds are issuable as coupon Bonds in the denomination of \$5,000, and as fully registered Bonds without coupons in denominations of \$5,000 and any authorized multiple thereof. Subject to the limitations and upon payment of the charges provided in the Indenture, fully registered Bonds may be exchanged for a like aggregate principal amount of coupon Series B Bonds of the same series and the same maturity bearing all unmatured coupons (and any unpaid coupons), or for a like aggregate principal amount of fully registered Bonds of the same series and the same maturity of authorized denominations, and coupon Bonds bearing all unmatured coupons (and any unpaid coupons) may be exchanged for a like aggregate principal amount of fully registered Bonds of the same maturity of authorized denominations.

This Bond and the coupons appurtenant hereto shall be negotiable and pass by delivery.

This Bond shall not be entitled to any benefit under the Indenture or the Supplemental Indenture or become valid or obligatory for any purpose until it shall have been authenticated by the certificate of the said Trustee, endorsed hereon.

IN WITNESS WHEREOF, CITY OF PORTLAND, OREGON has caused this Bond to be duly executed by its Commissioner of Public Utilities, by facsimile signature, and attested by its Auditor, by manual signature, and its corporate seal to be hereunto affixed manually or by facsimile, and has likewise caused the annexed coupons to be executed by facsimile signatures of its Commissioner of Public Utilities and its Auditor, all as of the 1st day of September, 1980.

CITY OF PORTLAND, Oregon

By

Commissioner of Public Utilities

ATTEST:

Auditor

(SEAL)

150167

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[Form of Interest Coupon]

On _____, 19 ___, City of Portland, Oregon will pay to bearer, [unless the Bond mentioned below shall previously have been called for redemption as provided in the Indenture referred to in said Bond and provisions for payment thereof shall have been duly made,] at the principal office of the United States National Bank of Oregon, Portland, Oregon upon presentation and surrender hereof, the sum of Five Thousand and no/100 Dollars (\$5,000) in any coin or currency of the United States of America which at the time of payment is legal tender for the payment of public and private debts, for semiannual interest then due upon its Hydroelectric Power Revenue Bonds, Series B, dated as of the 1st day of September, 1980, No.

> Commissioner of Public Utilities

Auditor

[Form of Certificate of Authentication]

This Bond is one of an issue described in the Indenture within mentioned.

as Trustee

By

Authorized Signature

1 :

[Form of Certificate of Registration]

(Note: There must be no writing in the space below except by the Trustee as Registrar.)

D Regis	ate of tration		Namo Registo	e of ered Ow	ner		Sign of Re	natu egis	re trar	
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	999-99-99-99-99-99-99-99-99-99-99-99-99	.			***			*****		
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[Form of Fully Registered Bonds]

CITY OF PORTLAND, OREGON

HYDROELECTRIC POWER REVENUE BOND, SERIES B

No. R-____

\$5,000

15016月

City of Portland, Oregon, a municipal corporation of the State of Oregon (the "City"), for value received, hereby promises to pay to the registered owner hereof, on the 1st day of October, , the principal sum of

FIVE THOUSAND DOLLARS

in such coin or currency of the United States of America as at the time of payment shall be legal tender for public and private debts and to pay interest thereon in like coin or currency from the date hereof at the rate of percent (ફ) per annum payable semiannually on the 1st days of April and October of each year beginning October 1, 1980, until such principal shall become due and payable, or if this Bond shall be duly called for redemption, until the redemption date, and to pay interest on any overdue principal and premium, if any, and (to the extent legally enforceable) on any overdue installment of interest at the rate aforesaid. Both principal of and interest on this Bond are payable, at the option of the holder thereof, at the principal office of United States National Bank of Oregon, Portland, Oregon (the "Trustee").

This Bond is one of a duly authorized issue of bonds of the City known as "Hydroelectric Power Revenue Bonds, Series B" (the "Series B Bonds") in an aggregate principal amount not exceeding \$17,000,000. All of the Series B Bonds are issued under, and are equally and ratably secured both as to principal, premium, if any, and interest by a Trust Indenture (the "Indenture"), dated as of June 1, 1979, and a Supplemental Trust Indenture thereto (the "Supplemental Indenture"), dated as of September 1, 1980, both executed by the City and Trustee, to which Indenture, Supplemental Indenture and all indentures supplemental thereto reference is hereby made for a description of the property thereby pledged, the nature and extent of the security thereby granted and a statement of the terms and conditions upon which the Series B Bonds are issued, the rights of the Bondholders and of the Trustee, the rights and obligations of the City and the indebtedness which is equally secured. Pursuant to the Indenture an initial series of the City's Hydro

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electric Power Revenue Bonds was issued. As provided in said Indenture, bonds of other series ranking equally with the initial series of the City's Hydroelectric Power Revenue Bonds may be issued and such bonds may vary in such manner as is provided and permitted in the Indenture. All bonds from time to time outstanding under the terms of the Indenture and the Supplemental Indenture are hereinafter referred to as the "Bonds".

The City owns dams as part of its existing Bull Run Water Supply System that can be used as part of hydroelectric power generating facilities to be constructed out of Bond proceeds on the Bull Run River in Multnomah and Clackamas Counties, Oregon. The power generated therefrom shall be sold to Portland General Electric Company, an Oregon corporation (the "Purchaser") pursuant to a Power Sales Agreement between the City and the Purchaser.

This Bond and the interest thereon are payable solely from the gross revenues to the City from the Power Sales Agreement which are hereby pledged for that purpose as more fully described in the Indenture. The City shall in no event be liable for the payment of the principal of, premium or interest on the Bonds or for the performance of any pledge, obligation or agreement of any kind whatsoever of the Purchaser, and none of the Bonds or any of the Purchaser's agreements or obligations shall be construed to constitute an indebtedness of the said City within the meaning of any constitutional or statutory provision whatsoever.

As provided in, and to the extent permitted by, the Indenture, the Supplemental Indenture or any indenture supplemental thereto, the Indenture and the Supplemental Indenture may be amended, altered, modified or supplemented by the City with the written consent of the Holders of 66-2/3% in principal amount of the Bonds then outstanding; provided, however, that no such modification shall effect the reduction of, or the extension of the stated time of payment of, the principal hereof or of the interest hereon or of any premium payable on the redemption hereof or change the percentage of Bondholders required to consent to any amendment, alteration, modification or supplement or deprive any Bondholder of the security afforded by the lien of the Indenture, and the Supplemental Indenture or change the rights and duties of the Trustee.

The Bonds may be redeemed at the option of the City on October 1, 1990, or on any interest payment date thereafter, in whole or in part, in inverse order of maturity, or for the purpose of refunding, in whole but not in part, as provided in the Indenture. The Bonds, when so redeemable, are redeemable at the principal amount of the Bonds to be redeemed and accrued interest thereon to the date of redemption, plus a premium expressed as a percentage of the principal amount of each Series B Bond

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so redeemed, as shown below:

DATE

REDEMPTION PRICE

October	l,	1990	and	April	1,	1991	103	3	R
October	l,	1991	anđ	April	1,	1992	102	2 1/3	28
October	1,	1992	and	April	1,	1993	102	2	8
October	l,	1993	and	April	1,	1994	10:	L 1/:	2 %
October	l,	1994	and	April	l,	1995	10:	L	R
October	1,	1995	and	April	l,	1996	100) 1/3	2 %
October	l,	1996	and	therea	aft	er	100)	₽

The Bonds of any series may also be refunded and prepaid by the issuance of other Bonds under the Indenture or by advance refunding, all as provided in Section 3.04 of the Indenture. Also all outstanding Bonds may be advance refunded under the provisions of Article VIII of the Indenture and the Indenture may thereupon be discharged as provided in said Article VIII the holders of outstanding Bonds shall thereafter be entitled to payment solely out of money or United States Government Securities (as defined in Article VIII) deposited with the Trustee in an amount sufficient to redeem Bonds when redeemable or at maturity, as the case may be.

The Bonds of any series are also redeemable out of proceeds received by the City from insurance and condemnation under certain conditions as provided in the Indenture. Should any act or omission to act of the Purchaser as defined in the Indenture result in interest on the Series B Bonds being includable in the gross taxable income of Bondholders, the Series B Bonds shall be immediately redeemable. In case of redemption in either such event, such redemption shall be at a price of 103% of principal amount if prior to October 1, 1990 and at par if on or after October 1, 1990. If Series B Bonds are not redeemed upon a determination that the interest thereon is taxable, the City shall pay interest on the Series B Bonds, from the date of such determination, at a rate of thirteen percent (13%) per annum or the maximum legal rate of interest if less than thirteen percent (13%).

As provided in the Indenture, notice of redemption (unless waived) shall be given by publication at least once in a newspaper of general circulation in the City of Portland, Oregon and in The Daily Bond Buyer (such publication to be not less than 30 nor more than 60 days before the redemption date). If any Bond called for redemption is fully registered, notice of redemption thereof shall also be mailed not less than 30 nor more than 60 days before the redemption date, to the registered owner of such Bond but neither failure to mail such notice nor any defect in the notice so mailed shall affect the sufficiency

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of the proceedings for redemption.

In case an event of default as defined in the Indenture shall occur, the principal of this Bond may become or be declared to be due and payable in the manner and with the effect provided in the Indenture.

This Bond is transferable by the registered holder hereof in person or by his attorney duly authorized in writing at the principal office of the Trustee in Portland, Oregon, but only in the manner, subject to the limitations and upon payment of the charges provided in the Indenture, and upon surrender and cancellation of this Bond. Upon such transfer a new registered Bond or Bonds without coupons of the same series and the same maturity, of authorized denomination or denominations, for the same aggregate principal amount will be issued to the transferee in exchange therefor.

The City and the Trustee may deem and treat the registered holder hereof as the absolute owner hereof for the purpose of receiving payment of or on account of principal hereof and premium, if any, hereon and interest due hereon and for all other purposes and neither the City nor the Trustee nor any paying agent shall be affected by any notice to the contrary.

The Series B Bonds are issuable as coupon Bonds in the denomination of \$5,000, and as fully registered Bonds without coupons in denominations of \$5,000 and any authorized multiple thereof. Subject to the limitations and upon payment of the charges provided in the Indenture, fully registered Bonds may be exchanged for a like aggregate principal amount of coupon Bonds of the same series and the same maturity bearing all unmatured coupons (and any unpaid coupons), or for a like aggregate principal amount of fully registered Bonds of the same series and the same maturity of authorized denominations, and coupon Bonds bearing all unmatured coupons (and any unpaid coupons) may be exchanged for a like aggregate principal amount of fully registered Bonds of the same series and the same maturity of authorized denominations, and coupons)

This Bond shall not be entitled to any benefit under the Indenture or the Supplemental Indenture or become valid or obligatory for any purpose until it shall have been authenticated by the certificate of the said Trustee, endorsed hereon.

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IN WITNESS WHEREOF, CITY OF PORTLAND, OREGON has caused this Bond to be duly executed by its Commissioner of Public Utilities, by facsimile signature, and attested by its Auditor, by manual signature, and its corporate seal to be hereunto affixed manually or by facsimile, all as of the 1st day of September, 1980.

CITY OF PORTLAND, Oregon

Ву

ATTEST:

Auditor

(SEAL)

Commissioner of Public Utilities

1501

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[Form of Certificate of Authentication]

This Bond is one of an issue described in the Indenture within mentioned.

as Trustee

By

Authorized Signature

All things necessary to make the Series B Bonds, when authenticated by the Trustee and issued as in the Indenture and this Supplemental Indenture provided, the valid, legal and binding obligations of the City and to constitute this Supplemental Indenture a valid, binding and legal agreement securing the payment of the principal of and interest on all the Bonds issued under the Indenture hereunder and for the enforcement of the covenants, agreements and stipulations herein contained have been done and performed and the creation, execution and issuance of the Series B Bonds, subject to the terms hereof, have in all respects been duly authorized:

NOW, THEREFORE, THIS SUPPLEMENTAL INDENTURE WITNESSETH:

That the City, in consideration of the premises and of the purchase of the Series B Bonds and of other good and lawful consideration, the receipt of which is hereby acknowledged, and to secure the payment of the Bonds and the performance and observance of all of the covenants and conditions herein or therein contained, has executed and delivered this Supplemental Indenture and has assigned, transferred, pledged and granted a security interest and by these presents does hereby assign, transfer, pledge and grant a security interest unto the Trustee, its successor or successors and its or their assigns forever, with power of sale, all and singular, the property hereinafter described (said property being herein sometimes referred to as the "trust estate") to wit:

GRANTING CLAUSES

DIVISION I

All right, title and interest of the City in and to all monies, earnings, revenues, rights to the payment of money, receivables, accounts and contract rights arising out of or resulting from that certain Power Sales Agreement between the City and the Purchaser dated as of April 12, 1979.

DIVISION II

Any and all other property of every kind and nature from time to time hereafter, by delivery or by writing of any kind, conveyed, pledged, assigned or transferred as and for additional security hereunder by the City or by anyone in its behalf to the Trustee, which is hereby authorized to receive the same at any time as additional security hereunder.

TO HAVE AND TO HOLD, all and singular, the rights and privileges hereby assigned, transferred and pledged, by the City

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15016%

or intended so to be, unto the Trustee and its successors and assigns forever, in trust, nevertheless, with power of sale for the equal and prorata benefit and security of each and every holder of the Bonds and coupons issued and to be issued hereunder, without preference, priority or distinction as to participation in the lien, benefit and protection hereof of one Bond or coupon over or from the others, by reason of priority in the issue or negotiation or maturity thereof, or for any other reason whatsoever, except as herein otherwise expressly provided, so that each and all of such Bonds and coupons shall have the same right, lien and privilege under the Indenture and this Supplemental Indenture and shall be equally secured hereby with the same effect as if the same had all been made, issued and negotiated simultaneously with the delivery hereof and were expressed to mature on one and the same date.

PROVIDED, NEVERTHELESS, and these presents are upon the express condition, that if the City or its successors or assigns shall well and truly pay or cause to be paid the principal of such Bonds with interest, according to the true intent and meaning of such Bonds and each of them, or shall provide for the payment or redemption of such Bonds when and as authorized by the provisions hereof, and shall also pay or cause to be paid all other sums payable hereunder by the City, then these presents and the estate and rights hereby granted shall cease, determine and become void, and thereupon the Trustee, on payment of its" lawful charges and disbursements then unpaid, on demand of the City and upon the payment of the cost and expenses thereof, shall duly execute, acknowledge and deliver to the City such instruments of satisfaction or release as may be necessary or proper to discharge this Supplemental Indenture of record, and if necessary shall grant, reassign and deliver to the City, its successors or assigns, all and singular the rights, privileges and interests by it hereby granted, conveyed and assigned, and all substitutes therefor, or any part thereof, not previously disposed of as herein provided; otherwise this Supplemental Indenture shall be and remain in full force.

AND IT IS HEREBY COVENANTED, DECLARED AND AGREED by and between the parties hereto that all Series B Bonds and coupons are to be issued, authenticated and delivered, and that all the trust estate is to be held and applied, subject to the further covenants, conditions, uses and trusts hereinafter set forth, and the City, for itself and its successors, does hereby covenant and agree to and with the Trustee and its respective successors in said trust, for the benefit of those who shall hold the Bonds and coupons, or any of them, as follows:

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ARTICLE I

DEFINITIONS

Section 1.01. "Bonds" shall mean Bonds of all series from time to time authenticated and delivered under the Indenture or this Supplemental Indenture, including the Series B Bonds.

"Indenture" shall mean the Trust Indenture between the City and the Trustee, dated as of June 1, 1979, as supplemented or amended by one or more indentures supplemental thereto.

"Series B Bonds" shall mean the City's Hydroelectric Power Revenue Bonds, Series B, in the aggregate principal amount of \$17,000,000, issued pursuant to the Indenture and this Supplemental Indenture.

"Supplemental Indenture" shall mean this Supplemental Trust Indenture as originally executed or as it may from time to time be supplemented or amended by one or more indentures supplemental hereto.

Section 1.02. All other capitalized terms used herein and not defined herein, shall have the same meanings as in the Indenture.

ARTICLE II

EXECUTION, AUTHENTICATION, MATURITY, FORM AND REGISTRATION OF BONDS

Section 2.01. The Series B Bonds authorized to be issued under the Indenture and this Supplemental Indenture shall be designated as "City of Portland, Oregon Hydroelectric Power Revenue Bonds, Series B" and shall be issuable as coupon Bonds and as fully registered Bonds without coupons. The Series B Bonds shall be issuable in the denominations specified in Section 3.01 hereof.

Section 2.02. The Series B Bonds shall be executed, authenticated, exchanged, issued, be in the form and otherwise be subject to the provisions of Article II of the Indenture.

ARTICLE III

DESCRIPTION OF THE SERIES B BONDS

The Series B Bonds to be issued at any time Section 3.01. or from time to time hereunder shall be entitled "City of Portland, Oregon Hydroelectric Power Revenue Bonds, Series B" and shall not exceed \$17,000,000 in aggregate principal amount for such entire series. The Series B Bonds shall be issuable as coupon Bonds, in the denomination of \$5,000 and as fully registered Bonds without coupons in the denominations of \$5,000 and any multiple thereof. Unless the City shall otherwise direct, the Series B Bonds shall be lettered and numbered as follows: The coupon Bonds shall be numbered only and fully registered Bonds shall be lettered R, followed by the number of the Series B Bond, the coupon Bonds and the fully registered Bonds to be numbered separately from _____ upward. Coupon Bond numbers may be reserved and assigned to fully registered Bonds initially issued or by exchange on the basis of one number for each \$5,000 of unpaid principal amount.

The coupon Bonds shall be dated September 1, 1980 and shall bear interest from such date payable semiannually on the first days of April and October of each year with the first interest payment to be made on October 1, 1981. The registered Bonds without coupons shall be dated as of the date of their authentication by the Trustee and shall bear interest payable semiannually from April 1 and October 1, as the case may be, next preceding the date thereof, or if such date of authentication is April 1 or October 1, such Bond shall bear interest from such date, or if such date of authentication shall be prior to October 1, 1980, such Bond shall bear interest from September 1, 1980; provided, however, that if, at the time of authentication of any registered Bond without coupons, interest is in default with respect thereto, such registered Bond shall bear interest from the interest date to which interest has previously been paid or made available for payment thereon. The Bonds, in fully registered and coupon form, the interest coupons to be annexed to coupon Bonds, and the Trustee's Certificate of Authentication shall be substantially in the forms, and be of the tenor and purport, respectively, hereinbefore set forth. If coupon Bonds shall be issued on or after October 1, 1980, the matured coupon or coupons on the coupon Bonds shall be removed prior to delivery.

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Interest Rate

The Series B Bonds shall bear interest per annum and shall mature in principal amounts as follows:

<u>Maturity Date</u>	Principal
October 1, 1983 October 1, 1984 October 1, 1985 October 1, 1985 October 1, 1986 October 1, 1987 October 1, 1988 October 1, 1989 October 1, 1990 October 1, 1991 October 1, 1992 October 1, 1993 October 1, 1993 October 1, 1994 October 1, 1995 October 1, 1996 October 1, 1997 October 1, 1998 October 1, 1999 October 1, 1999	$\begin{array}{c} \$ & 145,000 \\ 160,000 \\ 170,000 \\ 190,000 \\ 205,000 \\ 225,000 \\ 245,000 \\ 270,000 \\ 290,000 \\ 320,000 \\ 350,000 \\ 350,000 \\ 415,000 \\ 455,600 \\ 500,000 \\ 545,000 \\ 595,000 \\ 11,540,000 \end{array}$
• • • • • • •	• • •

Section 3.02. The Trustee, forthwith upon the execution and delivery of this Supplemental Indenture, or from time to time thereafter, upon the execution and delivery to it by the City of Series B Bonds and without any further action on the part of the City, shall authenticate Bonds in the aggregate principal amount of not to exceed \$17,000,000 and shall deliver them to or upon the Written Request of the City. In the event such Written Request is for authentication of Series B Bonds in a principal amount less than the maximum authorized hereunder, then the City shall direct the Trustee as to the amounts, the interest rates and the maturity dates all within the foregoing schedule; it being understood that no Series B Bonds issued hereunder shall mature later than October 1, 2010.

The City shall deposit with the Trustee all of the proceeds from the sale of the Series B Bonds (including accrued interest on the Series B Bonds from the date from which interest is to be paid thereon to the date of their delivery to the purchasers) and the Trustee shall out of such proceeds:

(a) Deposit to the credit of the Debt Service Fund, Interest Account established under Section 4.02 of the Indenture an amount sufficient to pay the interest due on the Series B Bonds from September 1, 1980 to October 1, 1982;

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(b) Deposit to the credit of the Debt Service Reserve Fund established under Section 4.04 of the Indenture an amount sufficient, together with the amounts previously deposited therein, to produce by October 1, 1982 the Debt Service Reserve Fund Requirement;

(c) Deposit to the credit of the Renewal and Replacement Fund established under Section 4.05 of the Indenture the sum of One Hundred Sixty-Two Thousand Six Hundred Thirty-Eight Dollars (\$162,638);

(d) Deposit to the credit of the Construction Fund created under Section 3.03 of the Indenture the balance of the proceeds of the sale of the Bonds. Such money is to be disbursed by the Trustee for the purposes and in the manner set forth in Section 3.03 of the Indenture.

ARTICLE IV

DISPOSITION OF REVENUES

Section 4.01. Principal of, and interest on, the Series B Bonds shall be paid from the Gross Revenues, as defined in the Indenture, as provided in Section 4.01, 4.02 and 4.03 of the Indenture.

Section 4.02. The monies initially deposited to the Debt Service Reserve Fund and the Renewal and Replacement Fund provided for in Section 3.02 hereof, shall be used as provided in Sections 4.04 and 4.05 of the Indenture.

Section 4.03. All monies received by the Trustee under the provisions of the Indenture and this Supplemental Indenture shall be trust funds under the terms of the Indenture and this Supplemental Indenture and shall not be subject to lien or attachment of any creditor of the City. Such monies shall be held in trust and applied in accordance with the provisions of the Indenture.

ARTICLE V

REDEMPTION OF BONDS

Section 5.01. The Bonds shall be redeemed as provided in Article V of the Indenture, except as follows:

(a) Should any act or omission to act of the Purchaser result in interest on the Bonds being includable in the

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gross taxable income of the Bondholders and should the City elect not to redeem the Bonds then outstanding, the interest rate to be paid on the Series B Bonds, from and after the first date the interest thereon is determined to be taxable, shall increase to thirteen percent (13%) per annum or the maximum legal rate of interest if less than thirteen percent (13%) and the City shall deposit into the Debt Service Fund and Interest Account sufficient monies to pay Bondholders, or reimburse former Bondholders, the difference between thirteen percent (13%) per annum or the maximum legal rate of interest if less than thirteen percent (13%) and the interest actually paid by the City to such Holders or former Holders of the Bonds. Redemption of the Bonds upon the inclusion of the interest on the Bonds in the gross taxable income of the Bondholders shall otherwise be as provided in the Indenture.

(b) Section 5.02 of the Indenture shall be amended to read as follows with regard to the Bonds:

Section 5.02. With respect to the redemption of Bonds through the Debt Service Fund, the following provisions shall apply:

FIRST:

The City shall deposit in the Debt Service Fund, Principal and Sinking Fund Account, monies in the amounts and at the times, respectively, to redeem Bonds as follows:

By October of the year	Principal Amount To Be Redeemed
2000	\$ 650,000 705,000
2001 2002	705,000 775,000
2002	845,000
2004	925,000
2005	1,010,000
2006	1,100,000
2007	1,205,000
2008	1,315,000
2009	1,440,000
2010	1,570,000

Monies deposited in the Principal Sinking Fund Account on or prior to each October 1 of the above years shall be applied by the Trustee to the purchase or redemption of Bonds on each such October 1 in the principal amounts shown above.

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SECOND:

Bonds may be redeemed, at the option of the City, on October 1, 1990 (but not prior thereto) or on any interest payment date thereafter, in whole or in part in inverse order of maturity (less than all Bonds of a single maturity to be selected by lot in such manner as may be designed by the Trustee and each registered Bond to be given a separate number for each \$5,000 unpaid), or for the purpose of refunding in whole, but not in part, and by lot if in part (each \$5,000 of principal of fully registered Bonds to be assigned one number). Bonds when so redeemable are redeemable at the principal amount of the Bonds so to be redeemed and accrued interest thereon to the date of redemption, plus a premium equal to three percent (3%) of such principal amount if redeemed on October 1, 1990 or April 1, 1991, two and one-half percent (2-1/2) if redeemed on October 1, 1991 or April 1, 1992, two percent (2%) if redeemed on October 1, 1992 or April 1, 1993, one and one-half percent (1-1/2)if redeemed on October 1, 1993 or April 1, 1994, one percent (1%) if redeemed on October 1, 1994 or April 1, 1994, one-half percent (1/2%) if redeemed on October 1, 1995 or April 1, 1996, and without premium if redeemed on October 1, 1996 or thereafter. At least thirty (30) days prior to the redemption date the City shall deposit sufficient funds with the Trustee to redeem Bonds as provided in this paragraph and otherwise upon the notice and in the manner provided in this Article V.

THIRD:

In case of the partial redemption of any fully registered Bond, the notice of redemption shall specify the portion of the principal amount thereof to be redeemed (which shall be \$5,000 or a multiple thereof) and shall state that payment of the redemption price will be made only upon presentation of such fully registered Bond for notation thereon of such payment on account of principal or for surrender in exchange for a coupon Bond or Bonds or a fully registered Bond or Bonds of authorized denominations in aggregate principal amount equal to the unredeemed portion of the principal amount thereof.

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ARTICLE VI

150166

DISCHARGE OF THE SUPPLEMENTAL INDENTURE

Section 6.01. This Supplemental Indenture shall be discharged in the same manner as the Indenture shall be discharged, as provided in Article VIII of the Indenture.

ARTICLE VII

THE TRUSTEE

Section 7.01. The Trustee hereby accepts the Trusts imposed upon it by this Supplemental Indenture, but only upon the terms and conditions set forth herein and in the Indenture, including those terms and conditions set forth in Article X thereof.

ARTICLE VIII

SUPPLEMENTAL INDENTURES

Section 8.01. Indentures supplemental to this Supplemental Indenture shall be permitted and made as provided in Article XII of the Indenture.

ARTICLE IX

MISCELLANEOUS PROVISIONS

Section 9.01. All applicable provisions of the Indenture shall, to the extent not specifically amended by the provisions hereof, apply with full force and effect to the Series B Bonds.

Section 9.02. All covenants, stipulations, promises, undertakings and agreements herein contained by or on behalf or for the benefit of the City shall bind and inure to the benefit of its successors and assigns, whether so expressed or not.

Section 9.03. The entitlement or headings of the several articles of this Supplemental Indenture shall not be construed to constitute any part thereof.

Section 9.04. Nothing in this Supplemental Indenture, expressed or implied, is intended or shall be construed to confer upon, or give to any person, association or corporation, other than the parties hereto, the co-trustee, if any, and the Holders from time to time of the Bonds of any series and coupons, and

Page 22 - Supplemental Trust Indenture

their successors and assigns, any security, rights, remedies or claims, legal or equitable, under or by reason hereof, or any covenant, condition or stipulation hereof; and this Supplemental Indenture and all the covenants and agreements herein contained are and shall be held to be for the sole and exclusive benefit of the parties hereto, the co-trustee, if any, and the Holders from time to time of the Bonds and coupons and their successors and assigns.

Section 9.05. Any monies deposited with the Trustee by the City in accordance with the terms and covenants of this Supplemental Indenture, in order to redeem or pay the Bonds of any series in accordance with the provisions of this Supplemental Indenture, and remaining unclaimed by the bearers or registered owners of the Bonds for six (6) years after the date fixed for redemption or of maturity, as the case may be, shall, if the City is not at the time to the knowledge of the Trustee in default with respect to any of the terms and conditions of this Supplemental Indenture, or in the Bonds or coupons contained, be repaid by the Trustee to the City upon its written request therefor; and thereafter the bearers or registered owners of the Bonds shall be entitled to look only to the City for payment thereof; provided, however, that the Trustee, before being required to make such repayment, shall, at the expense of the City, effect publication in an Authorized Newspaper of a notice to the effect that said monies have not been so applied and that after the date named in said notice any unclaimed balance of said monies then remaining shall be returned to the City. The City hereby covenants and agrees to indemnify and save the Trustee harmless from any and all loss, costs, liability and expense suffered or incurred by the Trustee by reason of having returned any such monies to the City as herein provided.

Section 9.06. The City, forthwith upon execution and delivery of this Supplemental Indenture and thereafter from time to time, will cause this Supplemental Indenture, and each supplement thereto, to be filed, registered and recorded and re-filed, re-registered and re-recorded in such manner and in such places as may be required by any applicable present or future law in order to publish notice of and fully protect the lien hereof upon, and the title of the Trustee to, the trust estate and in order to entitle the Bonds then outstanding to the benefits and security of this Supplemental Indenture, and from time to time will perform or cause to be performed any other act as provided by law and will execute or cause to be executed any and all further instruments which may be necessary for such publication, protection and entitlement. The City will pay or cause to be paid all filing, registration and recording taxes and fees incident to such filing, re-filing, registration, reregistration, recording and re-recording and all expenses inciden-

Page 23 - Supplemental Trust Indenture

tal to the preparation, execution and acknowledgment of this Supplemental Indenture, any instrument of further assurance and any supplements to any of said instruments and all federal or state charges arising out of or in connection with the execution and delivery of this Supplemental Indenture, the Series B Bonds, any instrument of further assurance, and any supplements to any of said instruments.

Promptly after any filing, registration or recording or any re-filing, re-registration or re-recording of this Supplemental Indenture or any filing, registration, recording, re-filing, re-registration or re-recording of any supplement to this Supplemental Indenture, or any instrument of further assurance which is required pursuant to the preceding paragraph of this Section 9.06, the City will deliver to the Trustee an Opinion of Counsel to the effect that such filing, registration, recording, re-filing, re-registration or re-recording has been duly accomplished and setting forth the particulars thereof.

The covenants and provisions of this Supplemental Indenture shall not become effective until the issuance of Bonds hereunder, except for the advance filing hereof as a financing statement under applicable law.

IN WITNESS WHEREOF, the City of Portland, Oregon has caused this Supplemental Indenture to be signed in its behalf, in its corporate name, by its Commissioner of Public Utilities and its Auditor; and United States National Bank of Oregon, Portland, Oregon has caused this Supplemental Indenture to be signed in its behalf, in its corporate name, by one of its Trust Officers, all as of the day and year first above written.

CITY OF PORTLAND, OREGON

By .

Commissioner of Public Utilities

ATTEST:

Auditor

UNITED STATES NATIONAL BANK OF OREGON, Portland, Oregon, as Trustee

By _

Trust Officer

Page 24 - Supplemental Trust Indenture

STATE OF OREGON

SS

County of Multnomah

The foregoing instrument was acknowledged before me this day of ______, 1980 by FRANCIS J. IVANCIE, Commissioner of Public Utilities of the City of Portland, Oregon, a municipal corporation, on behalf of the corporation.

> Notary Public for Oregon My Commission Expires:

STATE OF OREGON

ss.

County of Multnomah

The foregoing instrument was acknowledged before me this day of ______, 1980 by GEORGE YERKOVICH, Auditor of the City of Portland, Oregon, a municipal corporation, on behalf of the corporation.

> Notary Public for Oregon My Commission Expires:

Page 25 - Supplemental Trust Indenture

STATE OF OREGON

County of Multnomah

The foregoing instrument was acknowledged before me this day of ______, 1980 by ______, Trust Officer of the United States National Bank, a national banking association, on behalf of the association.

SS.

)

Notary Public for Oregon My Commission Expires:

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EXHIBIT B

150167

PRELIMINARY OFFICIAL STATEMENT DATED AUGUST 8, 1980

NEW ISSUE

\$17,000,000 City of Portland, Oregon

HYDROELECTRIC POWER REVENUE BONDS, SERIES B

Dated September 1, 1980

Due October 1, as shown below

Principal and semi-annual interest (April 1 and October 1, first coupon October 1, 1980 for one month's interest) payable at the office of United States National Bank of Oregon, Portland, Oregon, or at the offices of the fiscal agent for the State of Oregon, New York, New York, at the option of the holder. The Series B Bonds will be issued in the denomination of \$5,000 as coupon bonds or bonds registered as to both principal and interest in the denomination of \$5,000 and any multiple thereof. The United States National Bank of Oregon, Portland, Oregon is the Trustee.

The Series B Bonds shall be subject to redemption on or after October 1, 1990, in whole, or in part in inverse order of maturities (by lot within a maturity), on any interest payment date, at prices ranging from 103% if redeemed on October 1, 1990 or April 1, 1991, reducing $\frac{1}{2}$ of 1% every year to 100% on October 1, 1996 and thereafter, plus accrued interest to the date of redemption. The Term Bonds are also redeemable at par, plus accrued interest to the date of redemption, from the amounts credited to the Principal and Sinking Fund Account with respect to sinking fund installments. The Series B Bonds are also callable in the event of certain circumstances as more fully described herein.

Interest exempt, in the opinion of Bond Counsel, from present Federal income taxes under existing statues, regulations and administrative interpretations, except in the case of interest on any Series B Bond while held by a "substantial user" or a "related person." Under existing statutes, interest is also exempt, in the opinion of Bond Counsel, from State of Oregon personal income taxes.

The Series B Bonds are secured, on a parity with \$38,000,000 of bonds previously issued by the City of Portland, by a pledge of the Gross Revenues received by the City under the Power Sales Agreement with the Portland General Electric Company providing for the sale of power from the Project, and by the Funds established under the Trust Indenture. The Trust Indenture provides that the Trustee shall receive all of the Gross Revenues and deposit therefrom, first, into the Debt Service Fund amounts sufficient to pay the interest and principal becoming due on the Bonds and, thereafter, amounts as required in the Debt Service Reserve and Renewal and Replacement Funds. The City may issue bonds on a parity with the Series B Bonds under certain conditions as more fully described herein.

AMOUNTS, MATURITIES, RATES AND YIELDS OR PRICES

Amount	Due	Rate	Yield or Price	Amount	Due	Rate	Yield or Price
\$145,000		%	%	\$320,000		%	%
160,000	1984			350,000	, 1993		
170,000	1985			380,000			
190,000	1986			415,000			
205,000	1987			455,000			
225,000	1988			500,000			
•				545,000			
				595,000			
•							
		<i>c</i> / m	T D		1 0010		

\$11,540,000 % Term Bonds Due October 1, 2010 @ %

(accrued interest to be added)

The Series B Bonds are offered when, as and if issued and received by us and subject to the approval of legality by Ragen, Roberts, O'Scannlain, Robertson & Neill, Portland, Oregon, Bond Counsel. It is expected that the Series B Bonds in definitive form will be ready for delivery on or about September 17, 1980.

CITY OF PORTLAND

15016

CITY COUNCIL

Connie McCready Mayor Commissioner of Finance and Administration

Francis J. Ivancie	. Commissioner of Public Utilities
Charles R. Jordan	Commissioner of Public Safety
Mike Lindberg	Commissioner of Public Works
Mildred A. Schwab	Commissioner of Public Affairs

George YerkovichCity Auditor

DEPARTMENT OF PUBLIC UTILITIES

BUREAU OF WATER WORKS

Carl GoebelAdministrator

BUREAU OF HYDROELECTRIC POWER

James L. Doane Manager

SPECIAL SERVICES

CH₂M-Hill Portland, Oregon Consulting Engineer

Ragen, Roberts, O'Scannlain, Robertson & Neill Portland, Oregon Bond Counsel

Smith Barney, Harris Upham & Co., Incorporated San Francisco, California Financial Advisor

2

CITY OF PORTLAND

CITY COUNCIL

Connie McCready Mayor

Commissioner of Finance and Administration

Francis J. Ivancie	. Commissioner of Public Utilities
Charles R. Jordan	Commissioner of Public Safety
Mike Lindberg	Commissioner of Public Works
Mildred A. Schwab	Commissioner of Public Affairs

George YerkovichCity Auditor

R. M. Lappi, Jr	Finance Officer
Christopher P. Thomas	City Attorney

DEPARTMENT OF PUBLIC UTILITIES

Francis J. Ivancie Commissioner-In-Charge

BUREAU OF WATER WORKS

Carl GoebelAdministrator

BUREAU OF HYDROELECTRIC POWER

SPECIAL SERVICES

CH₂M-Hill Portland, Oregon Consulting Engineer

Ragen, Roberts, O'Scannlain, Robertson & Neill Portland, Oregon Bond Counsel

Smith Barney, Harris Upham & Co., Incorporated San Francisco, California Financial Advisor No dealer, broker, salesman or other person has been authorized by the City or the underwriters to give any information or to make any representations, other than those contained in this Official Statement, and if given or made, such other information or representations must not be relied upon as having been authorized by any of the foregoing. This Official Statement does not constitute an offer to sell or the solicitation of an offer to buy, nor shall there be any sale of the Series B Bonds by any person, in any jurisdiction in which it is unlawful for such person to make such offer, solicitation or sale. The information set forth herein has been obtained from the City and other sources which are believed to be reliable but it is not guaranteed as to accuracy or completeness by, and is not to be construed as a representation by, the underwriters. The information and expressions of opinion herein are subject to change without notice and neither the delivery of this Official Statement nor any sale made hereunder shall, under any circumstances, create any implication that there has been no change in the affairs of the City since the date hereof.

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SUMMARY STATEMENT

(Subject in all respects to more complete information contained in this Official Statement)

Purpose

The Series B Bonds are being issued to finance the completion of construction of a hydroelectric turbine and related improvements and transmission and supervisory facilities at each of two existing dams at Portland's water supply works on the Bull Run River. Series B Bond proceeds will also be used to fund, in whole or in part, a Debt Service Reserve Fund and a Renewal and Replacement Fund and to provide for the payment of interest on the Series B Bonds to October 1, 1982 and to pay the costs of financing, including the Series B Bond discount.

Completion of Construction

The Project Transmission Line and Access Road have been completed and construction of the powerhouses is underway and scheduled for completion by December 1981. The Project is scheduled for commercial operation by December 31, 1981.

Security

The Bonds, including the Series B Bonds, are secured by and payable from the Gross Revenues to be received by the City from the Portland General Electric Company pursuant to a Power Sales Agreement entered into between the City and Portland General Electric Company. The Power Sales Agreement shall be in full force and effect until August 31, 2017 or until the Bonds, including the Series B Bonds, are paid or provision is made for their retirement, whichever is later. The Bonds, including the Series B Bonds, are additionally secured by a Debt Service Reserve Fund which, commencing October 1, 1982, shall be maintained at maximum annual debt service. \$1,438,273 of the Series B Bond proceeds will be used, together with funds currently on deposit in the Debt Service Reserve Fund and earnings thereon, to produce, by October 1, 1982, the Debt Service Reserve Fund Requirement. The Bonds, including the Series B Bonds, do not constitute an indebtedness of the City of Portland within the meaning of any constitutional, statutory or City Charter provisions regarding the incurring of indebtedness by the City.

City of Portland

The City of Portland is located in northwestern Oregon at the confluence of the Columbia and Willamette Rivers, approximately 65 miles from the Pacific Ocean. Portland, with a population of approximately 385,000, is the largest City in Oregon and the second largest in the Pacific Northwest. Its metropolitan area contains a population of approximately 1,130,000 which represents approximately 40% of the population of Oregon.

The Bull Run Facilities

Located approximately 35 miles from Portland, the City's water supply works on the Bull Run River is the sole source of water for the City and a substantial part of the Portland metropolitan area. This water supply source consists of reservoirs located behind two existing dams. Dam No. 1 is a concrete dam completed in 1929 with a water depth of approximately 170 feet and Dam No. 2 is an earthfill dam completed in 1962 with a water depth of approximately 110 feet. Both dams were originally designed and constructed with provisions for the future addition of hydroelectric generation facilities.

Volcanic Activity

The Bull Run Watershed is located approximately 52 miles South of Mount St. Helens. During recent volcanic activity on Mount St. Helens, the Bull Run Watershed received only small amounts of ash. The Bull Run Reserve is located outside the drainage area of any active Cascade volcanos.

The Portland Hydroelectric Project

The Portland Hydroelectric Project consists of the design and construction of two power plants, one at Dam No. 1 and one at Dam No. 2, as well as transmission lines, plant telemetry system, access roads and a water quality intake tower. The combined capacity of both power plants is 36 megawatts and the resultant net annual energy production is expected to be 100.2 million kilowatt-hours per year. These facilities are scheduled for completion and initial commercial operation by December 31, 1981. The Portland Hydroelectric Project will be constructed by the City and will be operated and maintained by Portland General Electric Company.

Disposition of Project Output

The City of Portland does not operate a municipal electric distribution system and is served by the Portland General Electric Company and Pacific Power and Light Company, investor owned utilities. The City and Portland General Electric have entered into a Power Sales Agreement which provides for the delivery of the power generated, if any, to Portland General Electric by the City, and for the payment by Portland General Electric to the City regardless of the amount of power or energy delivered.

Portland General Electric

The Portland General Electric Company is an investor owned electric utility engaged in the generation, purchase, transmission, distribution and sale of electricity in the State of Oregon. Its service area is 3,350 square miles, including 54 incorporated cities of which Portland (also partially served by Pacific Power and Light Company) and Salem are the largest. The company estimates that the population of its service area at the end of 1978 was approximately 1,000,000. The Company serves approximately 40% of the electric customers in Oregon. The energy expected to be provided by the Portland Hydroelectric Project represents less than 1% of Portland General Electric energy sales. The Company expects that with its current nuclear facilities operating, its annual energy requirements will be provided as follows: $\frac{1}{2}$ from hydro, $\frac{1}{3}$ from nuclear, and $\frac{1}{6}$ from purchase and fossil fuel.

Cost of Power

The Consulting Engineer estimates that the Project energy will cost approximately 64.5 mills per kwh over the first 5 years of operation. Such costs are expected to remain relatively constant and will become more attractive, on a relative basis, as alternate sources of power continue to increase in cost.

The Power Sales Agreement

The Power Sales Agreement will run until August 31, 2017 or until the Bonds, including the Series B Bonds, are paid or provision is made for their payment, whichever is later, and payments under the agreement are to commence no later than October 20, 1982. It provides that all power and energy generated, if any, will be delivered to Portland General Electric by the City, and that Portland General Electric will pay the Annual Power Costs (as defined) including debt service on the Bonds, including the Series B Bonds, regardless of the amount of power or energy delivered, if any. The Power Sales Agreement also provides, among other things, that the City and Portland General Electric will share in the future benefits of the Portland Hydroelectric Project power as it compares to the cost of energy from the most recently constructed 500 MW or greater thermal generating facility on which PGE relies to meet its base load requirements.

Additional Bonds

Additional bonds on a parity with the Bonds may be issued without an earnings test, a) to complete the Project, b) to refund, prepay or advance refund any series of outstanding Bonds, or c) to finance Additional Facilities (as defined). For other than these purposes, no bonds payable from Portland Hydroelectric Project payments to the City may be issued.

Coverage of Debt Service

The payments to be made by Portland General Electric Company pursuant to the Power Sales Agreement result in coverage of debt service of from 1.27 times in 1983 increasing to 1.72 times in 1990. Following 1990 the estimated coverage of debt service increases each year until 2010 as the payments from Portland General Electric are estimated to increase each year from 1990 until 2010 by at least \$200,000. In 2011 said payments decline to reflect the drop in debt service but coverage of debt service in the years 2011 to 2016 is at least 5.0 times.

Rate Covenant

Under certain circumstances the City may elect to terminate the Power Sales Agreement. If it does, the City covenants that it will use its best efforts to find one or more other purchasers for the power generated by the Project and to assure that the sales price for such power shall be not less in any given year than 125% of the total debt service for the immediately following year plus all costs of operation and maintenance and any other expenses related to the operation of the Project and the servicing of the Bonds including the Series B Bonds.

City of Portland, Oregon

OFFICIAL STATEMENT

Relating to

\$17,000,000

HYDROELECTRIC POWER REVENUE BONDS, SERIES B

Portland, Oregon August , 1980

The purpose of this Official Statement, which includes the cover page (except for yields and prices), summary statement, and the appendices, is to set forth certain information concerning the City of Portland (the "City") and the City's Hydroelectric Power Revenue Bonds, Series B (the "Series B Bonds") in connection with the sale of the Series B Bonds by the City and for the information of all who may become holders of such Series B Bonds.

The Series B Bonds are being issued in accordance with Ordinance No. adopted by the City Council on August 6, 1980 (the "Bond Ordinance") and with the Supplemental Trust Indenture dated as of September 1, 1980 from the City and the United States National Bank of Oregon (the "Indenture"). The City issued on May 16, 1979 its \$38,000,000 Hydroelectric Power Revenue Bonds (the "1979 Bonds") to finance the Project. The Series B Bonds are being issued to complete construction of the Project. The 1979 Bonds and the Hydroelectric Power Revenue Bonds, Series B are collectively referred to as the "Bonds". There is no other outstanding debt of the City payable from the revenues that are pledged as security for the Bonds.

CITY OF PORTLAND GOVERNMENT

The City of Portland was incorporated in 1851 and has operated under a modified commission form of government since 1913. The City Council is composed of a Mayor and four Commissioners elected at large to four-year overlapping terms. Each performs legislative and administrative functions and heads one of the five operating departments of the City: Department of Finance and Administration; Department of Public Affairs; Department of Public Safety; Department of Public Utilities; and Department of Public Works.

The current Mayor of the City of Portland is Connie McCready who was first elected to the City Council in 1970 and was elected to her third term in 1976. In 1979 she was appointed Mayor to fill the unexpired term of Neil Goldschmidt who was appointed Secretary of Transportation.

Other members of the Council are as follows: Francis J. Ivancie was first elected to the Council in 1966 and re-elected to his fourth term in November 1978. Mr. Ivancie currently serves as Commissioner of Public Utilities. Commissioner Ivancie is the Mayor-Elect and will become Mayor in November 1980. Charles R. Jordan currently serves as the Commissioner of Public Safety. Mr. Jordan has been a member of the City Council since March 1974 and was elected to his second term in 1976 and his third term in 1980. Mildred Schwab has been a member of the City Council since January 1973 and was elected to her second term in 1978. She currently serves as Commissioner of Public Affairs. Mike Lindberg was appointed to the City Council to fill the unexpired term of Connie McCready when she became Mayor. Mr. Lindberg was elected to a full four year term in 1980. Mr. Lindberg serves as Commissioner of Public Works.

The City employs approximately 4,100 fulltime employees, approximately 85% of whom are represented by labor unions including the Teamsters Union and various units of the AFL-CIO. All union contracts include a no-strike clause, and there has never been a strike by employees of the City of Portland.

PURPOSE OF THE BONDS

The proceeds of the Series B Bonds will be used to fund the completion of construction of two powerplants, one at each of the two existing dams owned by the City on the Bull Run River, approximately 35 miles from Portland. The two power plants, transmission lines, plant telemetry system, access
roads, a water quality intake tower and associated improvements are referred to as the Portland Hydroelectric Project (the "Project").

In addition to financing the completion of the Project, Series B Bond proceeds will be used to provide funds which, together with interest earnings thereon, will be sufficient to: a) capitalize interest on the Series B Bonds to October 1, 1982; b) provide additional deposits to the Debt Service Reserve Fund which together with funds currently on deposit in the Debt Service Reserve Fund and earnings thereon will produce, by October 1, 1982, the Debt Service Reserve Fund Requirement of maximum annual debt service requirements; c) provide an additional deposit to the Renewal and Replacement Fund of \$162,638; d) pay the estimated costs of financing; and e) provide for the estimated bond discount.

See "Application of Series B Bond Proceeds" on page and "The Portland Hydroelectric Project" on page

SECURITY FOR THE BONDS

Under the Indenture, the Bonds are payable solely from the special funds established by said Indenture, maintained by the Trustee. The Indenture provides that the Trustee shall receive all of the Gross Revenues being paid by Portland General Electric Company (PGE) to the City pursuant to the Power Sales Agreement. The Trustee shall deposit therefrom monthly, first into the Revenue Fund and then to the Debt Service Fund, amounts sufficient to pay the principal of and interest on the Bonds on the next succeeding interest payment date, and thereafter amounts as required to other funds and accounts as specified in the Indenture.

Payments to be made by PGE to the City shall be payable monthly and shall commence on the earlier of October 20, 1982 or the date the written opinion of the Consulting Engineer stating both generating units are capable of continuous operation (the "Completion of Construction") is delivered to the City and PGE. If October 20, 1982 is the earlier date, then the monthly payments by PGE to the City until the Completion of Construction shall be in an amount equal to one-sixth ($\frac{1}{6}$) of the semi-annual interest and one-twelfth ($\frac{1}{12}$) of the annual principal payment required on the Bonds.

Following Completion of Construction, PGE agrees to pay the City, regardless of the amount of power or energy delivered, in monthly installments for each year, the sum of:

- (i) the Annual Power Costs,
- (ii) the Power Production Payments, and
- (iii) the Share the Savings Element.

These three items are referred to collectively as the "Annual Purchase Price".

Annual Power Costs—The Annual Power Costs is the sum of all of the City's costs resulting from the ownership of, and renewals and replacements to, the Project, and specifically include but are not limited to:

(i) The amount required by the Indenture to be set aside by the City for the payment of Debt Service on the Bonds, and

(ii) Any amount required by the Indenture to maintain the Debt Service Reserve Fund at an amount equal to the maximum annual debt service on the Bonds during any single future year in which the Bonds are outstanding (the "Debt Service Reserve Fund Requirement"), and

(iii) An amount equal to 1.25 percent of the sum of all of the City's costs of acquisition, construction and financing of the Project (the "Cost of Acquisition and Construction") less: the Debt Service Reserve Fund deposits funded from Bond proceeds; the amount funded from Bond proceeds to capitalize interest on the Bonds to October 1, 1982; and the amount funded from Bond proceeds for an initial deposit to the Renewal and Replacement Fund. Such payment of 1.25% of the Cost of Acquisition and Construction less the amounts discussed in the preceding sentence shall be adjusted annually by the ratio which the then current calendar year's Construction Cost Index bears to the Construction Cost Index for the year in which Completion of Construction occurred, which amount, as so adjusted, shall be placed in the Renewal and Replacement Fund, provided that in no event shall the amount in the Renewal and Replacement Fund exceed twelve percent (12%) of the Cost of Acquisition and Construction, less those portions described above, as adjusted for the Construction Cost Index ratio for the then current year and the year Completion of Construction occurred, and

(iv) An amount equal to the City's reasonable costs of administration in connection with the Project which costs may include, among others, fees payable to the Consulting Engineer for services performed pursuant to the Power Sales Agreement, and

(v) An amount equal to the City Bureau of Water Works' reasonable costs for water quality testing and control in connection with the Project, and

(vi) An amount equal to the sum of all permit or license fees including costs or expenses to carry out obligations imposed by a government agency as a condition of such permit or license and all taxes which the City may be required to pay in connection with the Project, and

(vii) An amount equal to the sum of insurance premiums payable for insuring against the risks specified in the Power Sales Agreement.

Power Production Payments—The Power Production Payments are an amount equal to the product of the actual annual Project output in kilowatt-hours of energy divided by 108,700,000 kilowatt-hours, multiplied by the greater of \$305,000 or ten percent (10%) of the annual amount required to be set aside by the City for the payment of debt service on the Bonds.

Share the Savings Element—The Share the Savings Element is an amount equal to fifty percent (50%) of the difference by which the Annual Power Cost (increased by costs of operation and maintenance paid by PGE) for such Contract Year is less than the normalized average cost per kilowatt-hour for such Contract Year of the most recently completed generating unit having a nameplate rating of 500,000 kilowatt capacity or greater, whether fueled by fossil fuels or by nuclear energy, upon any portion of the output of which unit PGE relies to meet its base load, which shall have been put into commercial operation prior to such Contract Year, times the number of kilowatt-hours actually delivered to PGE by the City during such Contract Year.

Should in any year the Share the Savings Element be a negative number, it shall be an offset for any future Contract Year Share the Savings Element.

The Bonds do not constitute an indebtedness of the City within the meaning of any constitutional, statutory or City Charter provisions regarding the incurring of indebtedness by the City and neither the Trustee nor any Bondholder shall have the right to require the imposition of any tax, charge, or fee for the payment of the Bonds other than the payment set forth in the Power Sales Agreement.

Covenants of Portland General Electric

The Power Sales Agreement contains the definitive agreements between PGE and the City of Portland relative to the Project. See Appendix C.

In addition to the payments enumerated above under "Security for the Bonds" which PGE agrees to make, PGE agrees as follows:

(i) To purchase the entire output of the Project.

(ii) To design and operate its system so that electric energy received from the Project will be confined to providing electric service to the general populace within the two contiguous counties of Clackamas and Multnomah, Oregon during the term of the Power Sales Agreement.

(iii) To defend and hold the City harmless from all claims (including but not limited to any additional interest costs required under the terms of the Trust Indenture) against the City resulting from a determination that interest on the Bonds was not, is not or will not be, exempt from Federal income tax and from Oregon personal income tax due to or caused by PGE's failure to continuously implement the System Design Diagram and Operational Instructions described in Exhibit A of the Power Sales Agreement.

(iv) To operate and maintain the Project from the Initial Date of Delivery until the termination of the Power Sales Agreement in accordance with the highest current standards of the electric power industry and to perform all operational and maintenance procedures specified in the Operations and Maintenance Manuals furnished by the City and approved by PGE. (v) To pay all costs of operation and maintenance.

(vi) To maintain liability insurance covering the risks for which PGE is responsible in the principal amount of not less than \$30,000,000, for any one occurrence, less any applicable reasonable deductible, which principal amount shall be subject to reasonable increases to reflect social and economic changes.

Covenants of The City of Portland

Under the Power Sales Agreement (see Appendix C) the City agrees with PGE, as follows:

(i) To proceed diligently with the financing and construction of the Project and, subject to uncontrollable forces, it plans but is not obligated, to complete the Project by January 1, 1982.

(ii) To sell to PGE the entire output of the Project.

(iii) To obtain and maintain adequate insurance with responsible insurers with policies payable to the City and for the benefit of the City and PGE as their respective interests may appear, against physical loss or damage to the Project on replacement cost basis and other risk mutually agreed upon by the City and PGE. The existing dams and Water Bureau facilities will not be insured, consistent with the past practices of the city.

(iv) In the event PGE shall default in its obligation to pay the Annual Purchase Price, the City shall have the right to offset any amount owed PGE by the City as a customer of PGE for electric power to the extent of such default. The City is a customer of PGE for electric power for street lighting and energy used in the City's municipal buildings and facilities.

Under the Indenture (see "Summary of the Trust Indenture") the City has also covenanted that in the event PGE defaults in its obligations under the Power Sales Agreement and the City elects to terminate the Power Sales Agreement, the City will use its best efforts to find one or more other purchasers for the power generated by the Project. The City further covenants that it will use its best efforts to assure that the sales price for such power to any other purchaser or purchasers shall be not less in any given year than 125% of the total debt service on the Bonds then outstanding for the immediately following year, plus all costs of operation and maintenance and any other expenses related to the operation of the Project and the servicing of the Bonds.

Background

PORTLAND HYDROELECTRIC PROJECT

The City of Portland water supply sources on the Bull Run River were initially developed 85 years ago. They are the sole source of water for the City and for a substantial part of the Portland metropolitan area. The existing water supply sources include impoundments located behind Dam No. 1 and Dam No. 2 within the Bull Run Reserve. Each dam was originally designed and constructed with provisions for the future addition of hydroelectric power generation facilities.

The Project consists of the design and construction of one powerhouse each at Dam No. 1 and Dam No. 2. In addition, a transmission line, plant telemetry system, access road, and water quality intake structures are also included in the Project. The Project will be constructed and owned by the City but all costs of operation and maintenance of the Project will be paid directly by Portland General Electric Company.

Power Generation

The Project includes two hydroelectric powerhouses, one at Dam No. 1 and one at Dam No. 2. Total combined capacity of both powerhouses is 36 megawatts. The net annual energy production from both powerhouses is estimated to be 100.2 million kilowatt-hours per year.

Powerhouse No. 1 will house a vertical Francis turbine having a rated output of 32,700 horsepower at 165 feet net head and a flow of about 1,960 cfs. The turbine will drive a generator at 212 rpm, having an output of 25,000 kVA at 13,800 volts and .95 power factor.

The turbine will be capable of operation at net heads ranging from 175 feet to about 100 feet and will be operated to maintain reservoir level variation within specified limits. The net annual average power production from this plant will be about 60.1 million killowatt-hours per year delivered to PGE.

Powerhouse No. 2 will have a vertical Kaplan turbine having a rated output of 16,300 horsepower at 100 feet net head and a flow of about 1,630 cfs. The turbine will drive a generator at 257 rpm, having an output of 12,500 kVA at 13,800 volts and .95 power factor.

The turbine will be capable of operation at net heads ranging from 110 feet to less than 70 feet and will be operated to maintain river and reservoir level variation within acceptable limits. The net annual average power production from this plant will be about 40.1 million kilowatt-hours per year and delivered to PGE.

Disposition of Power Output

The power generated by the Project will be transmitted to the PGE Bull Run substation and from there to the PGE Dunn's Corner switch station that feeds into the Portland metropolitan transmission system. All of the power generated by the Project will be used in the immediate two-county area. PGE will install automatic relaying systems that will prevent the exportation of power outside the two-county area.

Water Supply Considerations

The Bull Run Reserve is the only source of water for the City. The Federal Energy Regulatory Commission (FERC) license, State of Oregon permits, and Power Sales Agreement incorporate language to insure that the quality and quantity of water entering the City are unaffected by the project. The City has provided for the construction of a multiple-level intake structure at Dam No. 1 and for limitations in the operation of the Project so that water quality and quantity in the water supply reservoirs is unaffected. Two separate water quality studies have been commissioned by the City using the latest techniques, including computer modeling. The studies have been accepted by the Portland City Council, Bull Run Advisory Committee, State of Oregon Water Policy Review Board, and Department of Environmental Quality. These studies have shown that no change in water quality is expected as a result of the Project.

Transmission Facilities

Power generated by the Project will be transmitted approximately 10 miles on a 57-kV woodpolesupported transmission line to the substation at the PGE Bull Run power plant. A 57-kV bay exists for terminating the transmission line at the substation. Two existing 57-kV transmission lines intertie the Bull Run substation to the PGE Dunn's Corner station, which connects to the main transmission system that serves the Portland metropolitan area.

Operations Facilities

Facilities to be constructed at Dam No. 1 will include a multiple-level intake tower with trash racks. The existing 8-foot-diameter penstocks will be extended and combined into one 11-foot-diameter penstock. The powerhouse will be an indoor-type reinforced concrete structure and will include turbine guard valve, bridge crane, tailrace gates and gate hoist, and other usual powerhouse facilities. Auxiliary systems for cooling water, dewatering, drainage, oil, air, and CO_2 will be included in the powerhouse. The substation will include main transformer, breakers, takeoff structure, and auxiliaries.

Facilities to be constructed at Dam No. 2 include a $10\frac{1}{2}$ -foot-diameter penstock extension with hydraulically operated butterfly guard valve. The powerhouse will be similar to Powerhouse No. 1, described previously, and will include the same auxiliary equipment and systems.

Both powerhouses will normally be operated by supervisory control from PGE's existing Bull Run power plant, but can be locally controlled if required.

Construction Schedule

The schedule shown on Figure 3-1 of the Consulting Engineers Report illustrates the major activities and milestones on the Project. The primary activities shown are: engineering design; licensing; bond sale; and construction of the access road, transmission line, powerhouse, and water quality tower. The Project is scheduled for completion and initial commercial operation by December 31, 1981. Project licensing, engineering design, and equipment procurement have been underway since November 1976. Table 1 summarizes the status of key Project activities and milestones. Bid prices have been received on all items of construction.

Table 1

PORTLAND HYDROELECTRIC PROJECT' SUMMARY SCHEDULE

Scheduled Item	Date	Status
1. FERC License	3/22/79	License approved
2. Bond Sale		
Initial Series	6/ 6/79	Completed
Second Series	9/17/80	In progress
3. Complete Engineering Design	11/15/79	Completed
4. Access Road & Cofferdam Construction	12/21/79	Completed
5. Transmission Line	3/29/80	Completed
6. Award Turbine Generator Contract	4/ 4/79	Contract awarded
7. Powerhouse Nos. 1 & 2	6/ 9 /80	Under construction
Testing and Startup	11/15/81	
Commercial Operation	12/31/81	etimetek
8. Water Quality Tower Bids	7/15/80	Bids received

Environmental Factors

The Project is expected to have no significant adverse impacts on the environment. FERC has stated in the Project license articles that:

"Based upon the record, including agency and intervenor comments and our staff's independent analysis, we find that issuance of a license for this project, as conditioned, is not a major federal action significantly affecting the quality of the human environment."

This conclusion was based on the Commission's review of an exhaustive analysis of environmental conditions and potential impacts of the Project. This analysis is contained in Exhibit W of the City of Portland's license application for the Project.

The Project complies with applicable federal and state environmental protection laws.

Permits and Licenses

Federal and state environmental protection laws and regulations apply to the Project and require that permits be obtained from state agencies.

The most important license required for this Project is the Hydroelectric Generation License that was issued to the City on March 22, 1979, by FERC. All other remaining permits will be obtained as required.

The City also has obtained a Special Use Permit to construct and operate the Project from the United States Forest Service. The Project is included in a Bull Run Watershed Land Management Plan approved by the Regional Forester for the Forest Service.

Insurance

The Power Sales Agreement provides that the City shall maintain insurance in full force and effect against physical loss or damage to facilities to be constructed as part of the Project on a replacement cost basis and such other insurance as mutually agreed upon by PGE and the City. The existing dams and Water Bureau facilities are not insured, consistent with the past practices of the City.

The liability section of the Power Sales Agreement further provides that the City and PGE each assume full responsibility and liability for the maintenance and operation of the respective properties and that the City and PGE shall indemnify and save harmless each other from all liability and expense on account of any and all damages, claims or actions, including injury to or death of persons. In addition, the Power Sales Agreement provides that PGE shall maintain liability insurance in an amount not less than \$30,000,000 for any one occurrence subject to reasonable increases to reflect social and economic changes and subject to reasonable deductibles.

Revenue

The Power Sales Agreement between the City and PGE provides for a minimum annual payment of all costs of the Project including debt service, City administrative costs, a contribution to the Renewal and Replacement Fund, fees required for all permits, fees required for insurance premiums, and all payments that the City is required to make under permits and licenses issued to the Project. Operation and maintenance costs will be paid directly by PGE.

In the Power Sales Agreement, PGE has agreed to pay all reasonable Project related City costs regardless of the amount of generation that takes place. In addition, PGE will pay an amount equal to the ratio between the amount of power generated during the contract year divided by the amount of power available (108,700,000 kWh) times the amount of 10% of the annual debt service. In addition, PGE and the City will share the saving between the annual cost of energy from the Project and the cost of energy from the most recently constructed 500 MW or larger thermal generating facility on which PGE relies to meet its base load.

Operation and Maintenance

The Power Sales Agreement between the City and PGE requires PGE to operate and maintain the Project in accordance with the highest current standards of the electric power industry. PGE is also required to perform all maintenance and operation procedures specified in the operations and maintenance manuals furnished by the City and approved by PGE. The City shall have its consulting engineer inspect the operation and maintenance of the Project and submit reports on its inspections. PGE must remedy any deficiencies in a timely manner at its expense.

Table 2

PORTLAND HYDROELECTRIC PROJECT PROJECT COST SUMMARY

Project Activity	January 1979	July 1980	Notes
Engineering and Construction Management Services	\$ 3,250,000	\$ 3,247,000	
Inspection Services	309,000	880,000	1
Equipment Procurement			
a. Turbines and Generators	5,435,000	5,669,000	2
b. Turbine Guard Valves	604,000	670,000	3
c. Bridge Cranes	600,000	481,000	4
Construction			
a. Transmission Line	1,000,000	1,847,000	5
b. Access Road and Cofferdam	590,000	1,844,000	6
c. Powerhouse No. 1	5,337,000	8,324,000	7
d. Powerhouse No. 2	4,198,000	6,774,000	7
e. Water Quality Inlet Tower	2,626,000	3,897,000	8
f. Pressure Reducing Station		240,000	9
g. Rock Anchors		54,000	10
Subtotal	23,946,000	33,927,000	
Contingency	3,450,000	4,539,000	11
Total Estimated Project Cost	27,396,000	38,466,000	
Total Change in Cost	• •	11,070,000	
-			

Project Costs

Table 2 presents a comparison of current project costs to those included in the Official Statement dated June 1979 for the sale of the initial project bonds in the amount of \$38,000,000. The notes summarized below are intended to describe the differences in these two estimates.

1. The costs for inspection services reflect an expanded inspection program compared to that originally estimated.

2. The additional costs for turbines and generators are attributed to higher rates of escalation.

3. Turbine guard value costs reflect an actual equipment purchase price that is greater than the estimated cost in January 1979.

4. Bridge Crane costs reflect an actual equipment purchase price that is less than the estimated cost in January 1979.

5. Transmission Line cost represents actual construction costs for the completed construction that is greater than the January 1979 cost estimate because of unforeseen subsoil conditions that resulted in substantial additional costs for line anchors.

6. January 1979 estimate did not include costs for construction of the cofferdam at Unit No. 1 site. July 1980 costs represent actual costs for the completed construction that include substantial additional costs that are related to unforeseen subsurface conditions that caused changes in design and delays in construction.

7. July 1980 cost estimates for powerhouse construction represent actual contract amount. The January 1979 estimate was a budgetary estimate and was not based on final construction plans and specifications.

8. July 1980 cost estimates for water quality tower construction represents actual contract amount. The January 1979 estimate was a budgetary estimate and was not based on final construction plans and specifications.

9. The Pressure Reducing Station costs represents additional project scope that was not included in the January 1979 estimate and reflects the costs of completed construction.

10. The Rock Anchors represents additional costs required by unforeseen geologic conditions that were not included in the January 1979 estimate. Construction has been completed on this contract.

11. Contingency amounts are based on work to go.

FUTURE MARKETABILITY OF POWER PRODUCED

The Consulting Engineer has stated that the power produced by the Project will be highly marketable due to projected future power shortages in the Pacific Northwest. For many years, utilities and industries in the Northwest have purchased large amounts of peaking and secondary energy from sources inside and outside the region. Marketing channels are well established for blocks of power such as that to be produced by the Project.

The West Group is an association of sixteen public, private, and federal power-generating entities serving the Pacific Northwest. The West Group load area includes all of the Pacific Northwest except for those areas served by Idaho Power Company, Montana Power Company, and Utah Power Company. The West Group annually prepares forecasts of power resources and load for its members' service area.

Forecasts of power resources and loads indicate deficits of average energy for the West Group Area of the Northwest Power Pool every year from now to 1990-1991. Peaking energy forecasts also show deficits for the same period. Table 3 summarizes the 1980 official forecast by the Pacific Northwest Utilities Coordinating Committee of the West Group. It should be noted that other forecasts of power resources and load vary from the West Group.

The West Group forecast is believed to substantially overstate regional power resources. Several recent developments will result in lower resource estimates in future West Group Area forecasts, including delays in new plant construction, especially for the nuclear plants being built by the Washington Public Power Supply System, the Portland General Electric Company, and the Puget Sound Power and Light Company. Controversy over environmental issues raises doubts that some plants will ever be built.

In summary, the Consulting Engineers feel that new energy sources are needed to meet the growing electric energy loads in the Pacific Northwest. Forecasts indicate power shortages for at least the rest of this century.

Table 3

WEST GROUP AREA, NORTHWEST POWER POOL PEAK AND AVERAGE POWER SURPLUSES AND DEFICITS

Water Year		Peak Demand—MW	Average Energy-MW		
	1980-81	(1,136)	(2,042)		
	1981-82	(1,386)	(2,198)		
	1982-83	(1,835)	(2,166)		
	1983-84	(1,307)	(3,328)		
	1984-85	(1,466)	(3,152)		
	1985-86	(313)	(2,472)		
	1986-87	(13)	(1,964)		
	1987-88	(1,070)	(2,712)		
	1988-89	(2,758)	(3,251)		
	1989-90	(4,311)	(4,121)		
	1990-91	(4,613)	(4,060)		

Source: Data from West Group Area, Northwest Power Pool, March 1980 report. Note: Figures in parentheses indicate deficits.

APPLICATION OF SERIES B BOND PROCEEDS

The City proposes to apply the proceeds of the Series B Bonds approximately as follows:

CITY OF PORTLAND

Portland Hydroelectric Project

Estimated Application of Series B Bond Proceeds

	Real Sector Sec.
Project Construction Costs(1)\$11,070,000	
City Costs(2) 1,453,912	
Gross Project Requirements 12,523,912	
Less Interest Earnings (at 91/4 %) 531,307	
Net Project Requirements	\$11,992,605
Gross Capitalized Interest to October 1, 1982(3). 3,276,042	
Less Interest Earnings (at 91/4 %) 359,558	
Net Capitalized Interest	2,916,484
Gross Debt Service Reserve Fund Deposit(3) 1,716,660	
Less Interest Earnings (at 91/4 %) 278,387	•
Net Debt Service Reserve Fund Deposit	1,438,273
Estimated Financing Expenses	150,000
Deposit to Renewal and Replacement Fund	162,638
Estimated Bond Discount (2%)	340,000
Principal Amount of Bonds	\$17,000,000

(1) From Table 2

(2) Includes City's cost of administration, planning and preparation of various licenses.

(3) At an assumed interest rate of $9\frac{1}{4}$ %.

ESTIMATED DEBT SERVICE REQUIREMENTS

The following tabulation shows the scheduled debt service requirements on the 1979 Bonds and the estimated debt service on the Series B Bonds.

$\begin{array}{c c c c c c c c c c c c c c c c c c c $
September 301979 BondsMaturitiesInstallmentsInterest (1)TotalService1981 $ -$ 1982 $ -$ 1983 $ -$ 1983 $ 2,905,163$ 160,000 $ 1,559,088$ $1,719,088$ $4,624,251$ 1985 $2,909,038$ 170,000 $ 1,544,288$ $1,714,288$ $4,623,326$ 1986 $2,911,288$ 190,000 $ 1,528,563$ $1,718,563$ $4,629,851$ 1987 $2,911,913$ 205,000 $ 1,492,025$ $1,717,025$ $4,627,938$ 1989 $2,921,913$ 225,000 $ 1,492,025$ $1,717,025$ $4,627,938$ 1989 $2,992,7413$ 270,000 $ 1,448,550$ $1,718,550$ $4,645,963$ 1991 $2,927,413$ 270,000 $ 1,423,575$ $1,713,575$ $4,633,488$ 1992 $2,923,413$ 350,000 $ 1,367,150$ $1,716,750$ $4,645,563$ 1994 $2,923,413$ 380,000 $ 1,367,150$ $1,714,775$ $4,649,188$ 1995 $2,923,288$ $455,000$ $ 1,229,625$ $1,714,625$ $4,631,788$ 1996 $2,923,288$ $455,000$ $ 1,229,625$ $1,714,625$ $4,631,788$ 1996 $2,$
$\begin{array}{c c c c c c c c c c c c c c c c c c c $
$\begin{array}{cccccccccccccccccccccccccccccccccccc$
1998 $2,925,788$ 545,000 $$ $1,172,900$ $1,717,900$ $4,643,688$ 1999 $2,947,163$ 595,000 $$ $1,122,488$ $1,717,488$ $4,664,651$
1999 2,947,163 595,000 1,122,488 1,717,488 4,664,651
2001 $2,925,063$ — 705,000 1,007,325 1,712,325 4,637,388
$2002 \dots 2,933,063 - 775,000 942,113 1,717,113 4,650,176$
$2003 \ldots 2,935,500 - 845,000 870,425 1,715,425 4,650,925$
2004 $2,932,300$ — $925,000$ $792,263$ $1,717,263$ $4,649,563$
$2005 \dots 2,949,000 - 1,010,000 706,700 1,716,700 4,665,700$
$2006 \dots 2,931,250 - 1,100,000 613,275 1,713,275 4,644,525$
$2007 \dots 2,933,250 - 1,205,000 511,525 1,716,525 4,649,775$
$2008 \dots 2,928,250 \dots 1,315,000 400,063 1,715,063 4,643,313$
2009 2,916,250 1,440,000 278,425 1,718,425 4,634,675
$2010 \dots 2,922,250 - 1,570,000 145,225 1,715,225 4,637,475$
2011 2,919,500 — — — — 2,919,500
$2012 \dots 2,908,000 \dots 2,908,000 \dots 2,908,000$
$2013 \dots 2,912,750 \dots 2,912,750$
$2014 \dots 2,909,000 2,909,000$
$2015 \dots 2,890,750 \dots 2,890,750 \dots 2,890,750$
$2016 \dots 2,889,000 \dots 2,889,000 \dots 2,889,000$

(1) At an assumed interest rate of $9\frac{1}{4}$ %.

(2) Interest capitalized from Series B Bonds proceeds.

DEBT SERVICE REQUIREMENTS AND COVERAGE

The following table shows, through the year ending September 30, 1990, the debt service on the Bonds, the estimated payments to be made by Portland General Electric and the resultant coverage factors. Note that this table assumes completion of the Project by December 31, 1980 and the generation and delivery of 100,200,000 kwh to Portland General Electric Company. See Appendix A for a more complete description of the assumptions used in determining the payments to be made by PGE.

Year Ending September 30	Estimated Debt Service	Payments by Portland General Electric	Times Coverage
1981			
1982		\$1,655,394	
1983	\$4,617,163	5,882,720	1.27
1984	4,624,251	6,122,974	1.32
1985	4,623,326	6,005,076	1.30
1986	4,629,851	6,076,395	1.31
1987	4,627,901	6,702,931	1.45
1988	4,627,938	7,255,138	1.57
1989	4,649,501	7,629,692	1.64
1990	4,654,963	8,011,688	1.72

CITY OF PORTLAND LITIGATION

On November 14, 1977 the City of Portland, Oregon, and five of its residents brought two lawsuits against Bonneville Power Administration (BPA) in the United States District Court for the District of Oregon (Civil Actions 77-928 and 77-929). Subsequent to the filing of the lawsuits, all parties with which BPA has outstanding power sales contracts or net billing agreements were joined as defendants. In the first lawsuit plaintiffs sought, among other things, to have the City of Portland declared a preference customer of BPA; to have BPA's present method of marketing electric energy declared unlawful with respect to committing firm power to preference customers for resale for commercial and industrial purposes and for future load growth and committing power to non-preference customers in preference to the City of Portland; to have BPA's contracts to supply power to non-preference customers and to preference customers for resale to non-preference customers, executed after BPA knew or should have known that preference customers would apply for power, declared illegal; to have BPA's contracts to supply power to its customers for periods in excess of twenty years declared illegal; and to require BPA to sell power to the City of Portland. Certain Pacific Northwest investor-owned utility defendants, including PGE, subsequently filed cross claims against BPA and the Secretary of DOE based on alleged violations of the preference clause of the Bonneville Project Act. In the cross claims the defendants seek an order requiring Bonneville by December 20, 1979 to sell such defendants sufficient power to meet the loads of the defendants' domestic and rural customers.

On December 27, 1978 the District Court orally granted a motion by the defendants to dismiss the plaintiffs' claims in the first lawsuit on the ground that the City of Portland had not taken the steps necessary to render their claims ripe for court review. Subsequently the Court required further briefing on specific issues relating to the motion, and final briefs were filed on February 14, 1979. The investor-owned utilities' cross claims remain pending.

In the second lawsuit the City and the same residents seek, among other things, to have BPA's power sales contracts and net billing agreements entered into after January 1, 1970 declared null and void and to have their performance enjoined. The lawsuit is brought under the National Environmental Policy Act of 1969 ("NEPA") and alleges, among other things, that Bonneville did not prepare, publish, circulate and file detailed environmental impact statements concerning each of such agreements after NEPA became effective on January 1, 1970. The complaint also seeks an order requiring the defendants to prepare, publicly circulate, file and consider a final and adequate environmental impact statement for each such power sales contract and net billing agreement. Further proceedings in the second lawsuit have been deferred by the court pending its resolution of certain preliminary issues in the first lawsuit.

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These issues are expected to be resolved by the court in ruling on the motion to dismiss plaintiffs' claims in the first lawsuit. Depending on such resolution the court is expected to resume proceedings in the second lawsuit.

In the opinion of the City Attorney, the outcome of this litigation will have no adverse effect on the Bonds.

DESCRIPTION OF THE SERIES B BONDS

The \$17,000,000 Series B Bonds shall be dated September 1, 1980, shall bear interest from such date (payable semi-annually on October 1, and April 1 in each year), first coupon October 1, 1980 for one month's interest) at the respective rates specified by the successful bidder upon the public sale thereof by the City, and shall mature on the respective dates and in the respective amounts as follows:

Date October 1	Amount Maturing	Date October 1	Amount Maturing
1983	\$145,000	1992	\$ 320,000
1984	160,000	1993	
1985	170,000	1994	
1986	190,000	1995	415,000
1987		1996	455,000
1988	225,000	1997	500,000
1989		1998	545,000
1990		1999	595,000
1991		2010	11,540,000

The Series B Bonds maturing on October 1, 2010 are also subject to redemption in part by lot prior to maturity, upon not less than 30 days published notice, on October 1, 2000 and on each October 1 thereafter, upon payment of the principal amount thereof together with accrued interest to the date fixed for redemption, from amounts credited to the Principal and Sinking Fund Account representing sinking fund installments. The amount which shall be credited to such Bond Retirement Account as sinking fund installments shall be sufficient to redeem on October 1 of each year the principal amount specified for each of the years as follows:

October 1	Principal Amount	October 1	Principal Amount
2000\$	650,000	2006	\$1,100,000
2001	705,000	2007	
2002	775,000	2008	1,315,000
2003	845,000	2009	
2004	925,000	2010	1,570,000
2005	1,010,000		

The Series B Bonds will be issued in the denomination of 5,000 as coupon bonds, or bonds registered as to both principal and interest in the denomination of 5,000 and any multiple thereof. Coupon bonds may be exchanged for bonds registered as to be the principal and interest, and vice versa, and the holder requesting such exchange shall pay the costs of such exchange as provided in the Indenture. The Series B Bonds shall be subject to redemption on and after October 1, 1990, and prior to their respective maturities, in whole, or in part in inverse order of maturities (by lot within a maturity), on any interest payment date, at the respective redemption prices (expressed as percentages of the principal amount) set forth below, together with accrued interest to the redemption date:

Redemption Dates	Redemption Price
October 1, 1990 and April 1, 1991	103 %
October 1, 1991 and April 1, 1992	$\dots 102\frac{1}{2}$
October 1, 1992 and April 1, 1993	102
October 1, 1993 and April 1, 1994	$101\frac{1}{2}$
October 1, 1994 and April 1, 1995	101
October 1, 1995 and April 1, 1996	$100\frac{1}{2}$
October 1, 1996 and thereafter	100

The Series B Bonds are also redeemable out of proceeds received by the City from insurance and condemnation under certain conditions as provided in the Indenture, and are immediately redeemable if any act or omission to act of PGE results in interest on the Series B Bonds being includable in the gross taxable income of Series B Bondholders, such redemption in either event to be at a price of 103% of the principal amount if redeemed prior to October 1, 1991 and at par if redeemed on October 1, 1991 or thereafter. If the Series B Bonds are not redeemed upon a final determination that the interest thereon is taxable as described in this paragraph, the interest rate on the Series B Bonds from the date of such determination shall be 13% per annum or the maximum legal rate if less than 13%.

Principal and semi-annual interest (October 1 and April 1, first coupon October 1, 1980 for one month interest) are payable at the office of United States National Bank of Oregon, Portland, Oregon, or at the offices of the fiscal agent for the State of Oregon, New York, New York at the option of the holder.

The United States National Bank of Oregon, Portland, Oregon is the Trustee.

SUMMARY OF THE TRUST INDENTURE

The Series B Bonds will be issued under and secured by the Supplemental Trust Indenture dated as of September 1, 1980 from the City to United States National Bank of Oregon, as Trustee. Reference is made to the Indenture for complete details of all the terms of the Series B Bonds, the application of the City's Gross Revenues as defined in the Indenture and the security for all Series B Bonds. The following is a summary of certain provisions of the Indenture and should not be considered as a full statement thereof.

Application of Series B Bond Proceeds

The proceeds from the sale of the Series B Bonds (including accrued interest) will be deposited with the Trustee to be applied as follows:

1. An amount sufficient to pay the interest due on the Series B Bonds from September 1, 1980 to October 1, 1982 will be deposited in the Interest Account of the Debt Service Fund hereinafter described.

2. An amount together with funds already on deposit sufficient to produce by October 1, 1982 the Debt Service Reserve Fund Requirement will be deposited in the Debt Service Reserve Fund hereinafter described.

3. The sum of \$162,638 will be deposited in the Renewal and Replacement Fund.

4. The balance of Series B Bond proceeds will be deposited in the Construction Fund established by the Indenture to be withdrawn to pay the costs of completing the Project and issuing the Series B Bonds.

The Construction Fund

A withdrawal from the Construction Fund may be made only if the Trustee receives a detailed Written Request from the City setting forth the costs being paid which must be accompanied by a certificate (which may be in reliance upon such Written Request) of an Independent Engineer. The Engineer's certificate must state that the monies remaining on deposit in the Construction Fund after the withdrawal in question is made will be sufficient to complete the construction of the Project in accordance with plans and specifications approved by the Engineer and on file with the Trustee.

The City must provide the Trustee with monthly progress reports on the construction and, in due course, with a completion certificate from the Engineer stating, among other things, that the construction is fully paid for or that there are sufficient monies on deposit in the Construction Fund to pay any remaining claims.

If there are any surplus monies remaining in the Construction Fund after the construction and equipping of the Project, such monies shall be deposited in the Revenue Fund hereinafter described.

Security for the Bonds

As security for the Bonds, the Indenture provides for a pledge of the Gross Revenues of the City.

The term "Gross Revenues" is defined in the Indenture to mean all right, title and interest of the City in and to all monies, carnings, revenues, rights to the payment of money, receivables, accounts and contract rights arising out of or resulting from that certain Power Sales Agreement between the City and PGE dated as of April 12, 1979.

Disposition of Revenues

Except for the monies mentioned above which are required to be deposited in the Construction Fund during the construction period, the City is required to deposit all Gross Revenues, as defined above, in a separate Revenue Fund maintained by the Trustee. Beginning at the times indicated below, the Trustee will make transfers each month from the Revenue Fund to the following special funds established by the Indenture in the order of priority listed:

1. The Debt Service Fund, Interest Account. An amount will be deposited in the Interest Account out of Bond proceeds to pay interest on the Bonds to October 1, 1982. Commencing in October, 1982, PGE shall deposit each month to the Revenue Fund and the Trustee shall deposit therefrom each month in the Interest Account an amount equal to one-sixth of the next succeeding semiannual installment of interest on the Bonds, less any amount already on deposit in such Fund. Monies on deposit in the Interest Account must be used to pay interest on the Bonds as it becomes due.

2. The Debt Service Fund, Principal and Sinking Fund Account. The first installment of principal on the Bonds is due on October 1, 1983. Beginning October, 1982, the Trustee will each month, after making any required deposit in the In/crest Account, deposit from the Revenue Fund into the Principal and Sinking Fund Account, one-twelfth of the next succeeding annual installment of principal payable on the Bonds. Monies on deposit in the Principal and Sinking Fund Account must be used to pay principal on the Bonds as it becomes due and to redeem Bonds maturing on October 1, 2005 and each October 1 thereafter in accordance with the mandatory redemption schedule.

3. The Debt Service Reserve Fund. The purpose of the Debt Service Reserve Fund is to establish a reserve for the security of the Bonds in an amount equal to the Debt Service Reserve Fund Requirement as defined. Debt Service Reserve Fund Requirement as defined in the Indenture shall mean, as of any particular date of computation, an amount equal to the maximum annual debt service on the Bonds during any single future year in which any Bonds are outstanding. As mentioned, an amount will be deposited in the Debt Service Reserve Fund concurrently with the initial issuance of the Bonds to establish a reserve equal to the Debt Service Reserve Fund Requirement. Monies in the Debt Service Reserve Fund must be used to make up any deficiencies in the Interest Account and the Principal and Sinking Fund Account in that order. In the event that they are so used, the amount of any deficiency in the Debt Service Reserve Fund must be restored from monies on deposit in the Revenue Fund after making any required deposits in the prior Funds listed above before any monies are transferred to the other Funds described below. The sum required to be maintained in the Debt Service Reserve Fund will decrease if mandatory or optional redemptions of the Bonds result in a decrease in maximum annual debt service. If the amount in the Debt Service Reserve Fund shall exceed the Requirement, then such surplus shall be transferred to the Principal and Sinking Fund Account in an amount not to exceed the principal amount of Bonds maturing on the next succeeding October 1. After making such deposit if a surplus still exists in the Debt Service Reserve Fund then such surplus shall be deposited to the credit of the Interest Account in an amount not to exceed the sum required for the payment of interest on the next succeeding interest payment date. Any surplus still remaining in the Debt Service Reserve Fund shall be deposited to the credit of the Principal and Sinking Fund Account as a credit toward future payments from such account.

4. The Renewal and Replacement Fund. Funds on deposit in the Renewal and Replacement Fund shall be used first to make up any deficiencies in the Interest Account, Principal and Sinking Fund Account or Debt Service Reserve Fund (in the order listed) and second for repairs, renewals or replacements of the Project or for replacement or purchase of equipment or property for use in its operations, all as designated in a Written Request by the City to the Trustee. The sum of \$162,638 shall be deposited in the Renewal and Replacement Fund from Bond proceeds. In addition, the Indenture provides for monthly additions to the Fund in amounts specified in the Power Sales Agreement.

5. The Surplus Fund. The final fund for receiving deposits each month from the Revenue Fund is the Surplus Fund. All monies received in the Revenue Fund during each calendar month after making the required monthly deposits in the prior Funds listed above must be deposited in the Surplus Fund. Money on deposit in the Surplus Fund shall be used by the City for any lawful purpose of the City, subject at all times to the pledges, liens and trusts granted under the Indenture.

Investments of Funds

Monies in the Revenue Fund, Debt Service Fund, Debt Service Reserve Fund, Renewal and Replacement Fund and the Surplus Fund shall, at the direction of the City, by invested in Qualified Securities. "Qualified Securities" are defined in the Indenture to mean (i) direct obligations of, or obligations the principal of and interest on which, are unconditionally guaranteed by the United States of America; (ii) obligations of the Bank for Cooperatives, the Federal Intermediate Credit Bank, the Federal Home Loan Bank System, the Export-Import Bank of the United States, Federal Land Banks, the Federal National Mortgage Association or the Government National Mortgage Association; (iii) Public Housing Bonds and Project Notes fully secured by contracts with the United States; and (iv) bank time deposits or certificates of deposit secured by obligations described in (i), (ii) and (iii) above or by general obligations of the State of Oregon or any political subdivision thereof which are rated in the two highest categories by two nationally recognized bond rating agencies and are eligible under the Laws of the State of Oregon to be used as collateral for funds of the City.

The Indenture prohibits the City from making any investment which would result in the Bonds being classified as arbitrage bonds under the Internal Revenue Code resulting in the loss of tax-exempt status.

Additional Bonds

Additional parity Bonds may be issued under the Indenture only for one or more of the following purposes:

(i) to refund and prepay outstanding Bonds;

(ii) to advance refund outstanding Bonds by depositing with the Trustee, in trust for the sole benefit of the Bonds being refunded, direct or indirect obligations of the United States of America in a principal amount or which will mature in accordance with the terms thereof in a principal amount which will, together with income earned therefrom, be sufficient to redeem (when redeemable) all such Bonds to be refunded at or before their respective maturity dates;

- (iii) to finance the completion of construction of the Project;
- (iv) to finance the construction of additional new facilities; and

(v) to obtain funds in order to capitalize interest during construction of additional facilities, provide reserves and to pay expenses of issuance of such additional Bonds.

Additional Bonds may not mature later than the final effective date of the Power Sales Agreement. Completion Bonds may be issued on the basis of a certificate of an Independent Engineer stating whether the funds are necessary for the completion of the Project. Concurrently with the issuance of any completion Bonds, however, the City must deposit in the Debt Service Fund and in the Debt Service Reserve Fund additional amounts in proportion to the amount of completion Bonds issued over the amount of Bonds issued.

Other Important Covenants

The Indenture contains other important covenants. These are, in part, as follows:

1. The City covenants that it has good and indefeasible title to the Project, free and clear of liens and encumbrances except to the extent permitted in the Indenture.

2. The City covenants that it will not consent voluntarily to any amendment or rescission of the Power Sales Agreement, to take any action in connection with the Power Sales Agreement which would in any manner impair or adversely affect the rights of the Bondholders; provided, however, that the City may terminate the Power Sales Agreement in the event PGE should default thereunder and such termination is in the best interests of the Bondholders.

3. The City agrees that it will not use, or permit to be used, any property acquired out of the Bond proceeds or any other monies or funds in such manner as would result in the loss of tax exemption of the interest on the Bonds otherwise afforded under Section 103(a) of the Internal Revenue Code.

4. The City covenants that it will not, and it will not cause the Trustee to, make any investment or do any other act during the period any Bonds are outstanding under the Indenture, as amended and supplemented, which would cause such Bonds to become or be classified as arbitrage bonds.

5. The City will keep that part of the Project acquired and/or constructed from the proceeds of the Bonds insured, to the extent such insurance is available at reasonable cost, with responsible insurers and at least to the extent that similar insurance is usually carried by electric utilities operating like properties, against risk of direct physical loss, damage to, or destruction of, the Project, and against any other risk materially agreed upon between the City and PGE.

6. The City covenants that it will maintain, or cause PGE to maintain, so long as any of the Bonds are outstanding, public liability insurance with limits of not less than \$30,000,000 for any one occurrence involving any accident or other incident. Such policies shall be subject to reasonable increases to reflect social and economic changes and may have loss deductible clauses in amounts determined between the City and PGE to be reasonable.

7. The City covenants that if PGE defaults in its obligations under the Power Sales Agreement and the City elects to terminate the Agreement, the City will first use its best efforts to find one or more further purchasers for the power generated by the Project. The City further covenants that it will use its best efforts to assure the sales price for such power to any other purchaser or purchasers shall be not less in any given year than 125 percent of the total debt service on the Bonds then outstanding for the immediately following year, plus all costs of operation and maintenance and any other expenses related to the operation of the Project and the servicing of the Bonds.

Other Provisions

The Indenture contains provisions other than those summarized above and such provisions include, but are not limited to, provisions relating to procedures for redemption of Bonds, amendments to the Indenture, waivers of defaults by holders of Bonds, limitations on suits by holders of Bonds, and the creation of no personal liability under the Indenture of any officer, agent or employee, past, present or future, of the City.

THE CITY OF PORTLAND

Background

The City of Portland is located in northwestern Oregon at the meeting point of the Columbia and Willamette Rivers, approximately 65 miles from the Pacific Ocean. Residents of the City enjoy the benefits of a sophisticated transportation and distribution network, including a major world seaport, four railroads, 10 air passenger and cargo carriers and a complete network of interstate highways.

Although the City of Portland is primarily within Multnomah County, portions of the City also reach into Clackamas County and Washington County. The Portland Standard Metropolitan Statistical Area (SMSA), having an estimated population of more than 1,150,000, covers the urbanized area of the above counties as well as Clark County in the neighboring State of Washington. The combined populations of Multnomah, Clackamas and Washington Counties currently represents more than 40% of the State's population.

Portland and the surrounding area enjoy a moderate climate where temperature extremes are rare and usually of short duration. Winters are mild and a frost-free season extends from 180 to 250 days per year. Rainfall occurs sporadically during all seasons, with the principal rainy period extending generally from mid-November through March, and averages 38 inches per year.

Financial Data

Property taxes are payable in four installments, the 15th day of November, February, May and August. As of November 15th of each year there is a 3% discount for taxes paid in full, a 2% discount for taxes $\frac{3}{4}$ paid and a 1% discount for taxes $\frac{1}{2}$ paid.

Table 4 presents a five-year summary of total Multnomah County tax levies, Portland's share of the total levy (expressed as a percentage) and the total amount of taxes collected by the final tax payment date including prior years' delinquencies. As of April 30, 1978 the County had collected nearly 83% of the total 1977-78 levy.

Table 4

MULTNOMAH COUNTY

Tax Levies and Delinquencies

Fiscal Year	Total Tax Levy	City's Share of Tax Levy	Amount Collected by August 15	Percent Collected by August 15
1975/76	\$205,712,760	20.2%	\$201,253,062	97.83%
1976/77		19.7		
1977/78		20.2		
1978/79		20.2		
1 979/ 80		20.6		

Assessed valuations in Oregon are based upon 100% of true cash value of taxable property. The record of assessed valuation of the City of Portland and Multnomah County for the levying of taxes for the period 1974-75 through 1979-80 is as follows:

Table 5

CITY OF PORTLAND

Assessed Valuation(1)

	<u> </u>	City of Portland		
Tax Year	Within Multnomah County	Outside Multnomah County	Total	Multnomah County
1974/75	\$4,623,941,051	\$14,578,204	\$4,638,519,255	\$ 6,601,803,446
1975/76	4,980,241,528	15,688,436	4,995,929,964	7,158,868,040
1976/77	5,433,735,761	18,841,101	5,452,576,862	7,849,742,110(2)
1977/78	6,156,624,351	24,869,503	6,181,493,854	8,926,199,366(2)
1978/79	7,106,068,082	27,869,728	7,133,937,810	10,377,947,149(2)
1979/80	8,679,833,756	33,513,904	8,713,347,660	12,869,355,684(2)

(1) Source: City Auditor of the City of Portland.

(2) Net of Urban Renewal Project incremental assessed value.

Taxes vary slightly within the City dependent upon the overlapping taxing agencies. A five-year summary of the total tax rate throughout most of Portland (per \$1,000 of assessed value), is shown in Table 6. As is noted in the tabulation, rates ranged from a high of \$28.82 in 1976-77 to a low of \$20.46 in 1979-80.

Table 6 CITY OF PORTLAND Total Tax Rate (1)

<u>1</u>	1975/76	1976/77	1977/78	1978/79	1979/80
Multnomah County	\$ 4.46	\$ 4.59	\$ 4.26	\$ 3.87	\$ 3.13
Multnomah County Intermediate Education					
District	4.28	4.13	3.85	1.15	.97
Port of Portland	.79	.74	1.15	.94	.44
Portland School District No. 1	10.12	10.34	9.06	10.43	8.99
Portland Community College	.65	.62	.58	.52	.44
Metro Service District		.17	.14	.12	.10
City of Portland	8.35	8.23	7.92	7.92	6.39
Total	\$28.65	\$28.82	\$26.96	\$24.32	\$20.46

(1) Source: Multnomah County Tax Collector.

Table 7 presents a statement of direct and overlapping bonded debt for the City of Portland as of June 30, 1979. Oregon statutes limit the direct bonded indebtedness of any city (less any revenue bonds, revenue-paid general obligations and assessment bonds) to 3% of assessed value.

Table 7

CITY OF PORTLAND

Statement of Direct and Overlapping Bonded Debt(1)

Agency	Percent Applicable	Debt Applicable June 30, 1979
City of Portland	•	
General Purpose Bonds	100%	\$ 260
Water Bonds	100	21,759,952
Assessment Bonds	100	8,193,314
Urban Renewal Bonds	100	38,475,000
Parking Revenue Bonds	100	13,350,000
Hydroelectric Power Bonds	100	38,000,000
Golf & Tennis Revenue Bonds	100	985,000
Subtotal		120,793,526
Less: Self Supporting Water Bonds	100	21,759,952
Self Supporting Hydroelectric Power Bonds		38,000,000
Assessment Bonds		8,193,314
Subtotal		67,953,266
Net Direct Debt		52,840,260
Overlapping Debt		
Port of Portland	38.25-100	29,816,999
Mt. Hood Community College District	3.63	8,975
Clackamas County Area Education District	0.36-0.90	280
Washington County	0.27 - 3.63	1,640
Beaverton School District	0.53	1,100
Four Other School Districts	Various	27,098
Net Overlapping Debt		29,856,092
Net Direct and Overlapping Debt	· .	\$ 82,696,352

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(1) Source: City Auditor of the City of Portland.

On March 17, 1977 the Municipal Finance Officers Association awarded its Certificate of Conformance for financial reporting for the annual financial report of the City of Portland. The Certificate covers a three-year period through 1979, based on an annual review by the Association. The first such annual review has been completed. Table 8 presents a five-year summary of Municipal revenues and expenditures.

Table 8

CITY OF PORTLAND

Summary of Revenue and Expenditures for the Five Years Ending June 30, 1979(1)

	For the F	iscal Year Ended	June 30	
1975) 1978	1977	1976	1975
REVENUES		•		
Property Taxes \$ 36,323,	893 \$34,352,736	\$32,496,047	\$30,209,293	\$27,566,384
Other Taxes 1,588,	023 1,331,689	1,153,604	963,170	925,543
Total Taxes \$ 37,911,	916 \$35,684,425	\$33,749,651	\$31,172,463	\$28,491,927
Licenses and Permits 18,839,	101 16,038,258	14,283,882	$11,\!330,\!854$	9,443,078
Service Charges and Fees 3,118,	640 3,509,785	3,210,896	2,731,011	2,377,776
Other Governmental Sources 7,557,	647 5,978,989	5,346,008	5,706,969	4,970,098
Interfund Transfers and				
Reimbursements 45,020,	353 35,791,524	30,631,511	29,975,632	27,813,571
Miscelianeous Revenues 2,692,	237 1,919,758	1,440,692	1,870,767	1,908,009
Total Revenue \$115,139,	894 \$98,917,739	\$88,562,640	\$82,787,696	\$75,004,459
EXPENSES				
Department of Finance and				
Administration \$ 7,205,	535 \$ 4,516,284	\$ 3,959,698	\$ 4,585,545	\$ 5,107,788
Department of Public Affairs 20,049,		13,585,099	14,622,684	14,993,006
Department of Public Safety 47,269,		41,042,478	37,737,307	34,295,612
Department of Public Works 21,700,		17,618,092	$15,\!810,\!543$	14,175,581
Department of Public Utilities 3,283,	176 3,261,298	2,628,550	2,185,111	1,982,830
Non-Departmental 1,488,	824 1,457,514	1,283,403	1,731,011	938,222
Total Expenses \$100,996,	728 \$92,122,927	\$80,117,320	\$76,672,201	\$71,493,039
CAPITAL OUTLAYS				
Department of Finance and				
	975 \$ 56,933		\$ 96,094	\$ 57,284
Department of Public Affairs 2,300,	• •	797,361	773,434	1,447,391
Department of Public Safety 605,		628,197	313,395	470,267
Department of Public Works 5,566,		1,278,543	642,146	1,040,889
Department of Public Utilities 2,832,		,	525,044	838,839
	822 8,068	502	17,812	4,762
Total Capital Outlay \$ 11,354	222 \$ 6,255,987	\$ 3,262,562	\$ 2,368,735	\$ 3,859,432

(1) Source: City Auditor of the City of Portland.

Pension Plans

Substantially all of the employees of the City of Portland, other than fire and police personnel, are covered under the Oregon Public Employees Retirement System (PERS). The pension program must undergo an actuarial review at least once each four years, as required by statute. The most recent actuarial valuation of PERS was made during the 1977 fiscal year and determined that PERS had substantial unfunded amounts for vested benefits and prior service of its participants as of December 31, 1975. Accordingly the City's contribution rate of 7.88% of employee compensation will be increased in stages each year beginning with the 1979 fiscal year at 8.92% to 11.28% in the 1982 fiscal year and the following 26 fiscal years.

All sworn fire and police personnel are covered under the City Fire and Police Disability Retirement Fund. The Fund is financed on the pay-as-you-go basis, primarily from property taxes and member contributions. The Board of Trustees of the Fund has the authority to levy taxes to a maximum rate of \$2.50 per \$1,000 of true cash value. The levy for 1977-78 was \$10,239,564, approximately \$1.66 per \$1,000. If there is a funding deficiency, benefits are to be paid on a pro rata basis. The City is not liable for any such deficiency.

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Labor Relations

The City of Portland has approximately 4,100 fulltime employees and usually ranges between 200-300 seasonal employees. The City has operated under a formalized collective bargaining ordinance since 1969. Approximately 85% of the employees are now represented by some bargaining unit, nine of which are AFL-CIO affiliates and one is affiliated with the Teamsters Union.

Contracts with the bargaining units run out at various times, including two contracts covering approximately 1,900 employees which run out this year. All contracts with the City have no-strike provisions and there has never been a public employee strike against the City of Portland.

Growth Indices

Various growth indices for the City of Portland and the Portland SMSA during the past five years are shown in the following tabulation.

		Growth	Indices		
Year	Portland Building Permit Valuations	⁽¹⁾ Multnomah Co. Bank Deposits (millions)	⁽²⁾ Portland Retail Salcs (thousands)	⁽²⁾ Portland Median Household Eff. Buying Income	⁽³⁾ Foreign Trade (thousands of tons)
1975	\$125,735,295	\$2,373.5	\$1,555,311	\$11,237	7,137
1976	102,532,995	2,681.6	1,670,628	12,062	7,929
1977	151,860,055	3,017.2	1,686,326	12,937	8,015
1978	237,169,010	3,770.2	1,867,552	14,491	9,983
1979	247,820,050	4,693.8	NA	NA	11,888

NA-Not Available.

(1) Source: State Superintendent of Banks.

- (2) Source: Sales and Marketing Management "Survey of Buying Power" estimates.
- (3) Waterborne commerce, exclusive of imported petroleum products, reported for Portland by the Port of Portland.

Employment

Total estimated civilian employment in the Portland SMSA stood at 562,000 in December 1978. Unemployment had fallen from 9.8% in 1975 to an estimated 4.9% in 1978. Total non-agricultural employment as of December 1978 is segregated by category in Table 9.

Table 9

PORTLAND SMSA

Nonagricultural Employment(1)

Manufacturing
Contract Construction
Transportation, Communication and Utilities
Wholesale and Retail Trade
Finance, Insurance and Real Estate 40,700
Services and Miscellaneous102,500
Government:
Federal
State and Local
Total Wage and Salary
Other Categories
Total

(1) Source: Oregon State Department of Human Resources.

The following tabulation lists the 30 largest manufacturing firms in the Portland SMSA. Many nationally recognized firms are included on this listing, including FMC Corporation, Crown Zellerbach, Alcoa, Reynolds Metals and International Paper Co.

PORTLAND SMSA

30 Largest Manufacturing Firms (1)

Firm	Product	Employees
Tektronix. Inc.	Display and signal equipment	
Crown Zellerbach	Pulp, paper, wood and chemicals	
	Railroad cars, oil tankers	
	Heavy duty trucks	
	Sportswear	
	Steel castings	
	Aluminum ingots	
	Slide-viewers, projectors	
	Newsprint, meat/fruit wrap, paper towels	
	Fork lift trucks, heavy equipment and logging equipm	
	Nuclear components, valves and pumps	
Pendleton Woolen Mills	Men's and women's apparel	1,044
Reynolds Metals Co.	Aluminum ingots	1,000
Oregonian Publishing Co.	Newspaper, daily and Sunday	968
	Aircraft components	
	Fruits and vegetables	
	Investment castings	
	Sawchains, power tools and fasteners	
	Lumber, pulp, plywood and paper	
	Printing papers	
	Barges, industrial valves and fittings, marine equipm	
	Steel	
	Barges, ship conversion	
	Underground mining equipment	
	Cookies, crackers	
	Canned fruits and vegetables	
	Airframe structures, relays and gyroscopes	
	Plywood, lumber and logs	
	Concrete block plant equipment	
Owens-Illinois, Inc.	Glass containers	46 0

(1) Source: Portland Chamber of Commerce.

Portland is corporate headquarters for numerous corporations with nationally recognized names. Among these firms are Tektronix, in the electronics field; Jantzen, White Stag, Kandel Sportswear and Pendleton Woolen Mills in clothing; and Louisiana-Pacific Corp. in lumber.

Education

Primary and secondary education in the City of Portland and some immediately surrounding areas is provided by Portland School District No. 1. The District operates 14 high schools, 89 elementary schools, 29 special schools and five alternative schools, providing education for approximately 57,500 students.

Portland State University, one of the three large universities in the Oregon State System of Higher Education, is located on a campus encompassing an area of 26 blocks adjacent to the downtown business and commercial district of Portland. The University offers baccalaureate degrees in 34 areas of the liberal and professional arts and sciences, masters degrees in 29 fields, and three interdisciplinary doctoral programs involving 11 departments. Enrollment is nearly 16,000.

Also located in Portland is the University of Oregon Health Sciences Center, which represents a combining of the University's Medical School, Dental School and School of Nursing. Combined enrollment is approximately 2,000. Associated hospital, clinical and research facilities add considerably to the community benefit from the location of the Health Services Center in Portland.

Independent colleges in Portland include Lewis & Clark College and the University of Portland, each with approximately 2,300 students; Reed College, 1,100 students; the Marylhurst Education Center which serves approximately 2,000 students in classes and programs for all ages; and two small church affiliated schools, Warner Pacific College and Columbia Christian College. The Western States Chiropractic College also is located at Portland. Community colleges serving the Portland area include Portland Community College, which operates educational centers serving some 55,000 people a year in several locations in Portland as well as in neighboring Washington and, to the north, Columbia Counties; Mt. Hood Community College serving about 12,000 students per term at its campus near Gresham east of Portland, and Clackamas Community College serving about 7,000 students per term at Oregon City in Clackamas County. Two small junior colleges, Concordia College and Judson Baptist College, are in Portland. The Division of Continuing Education of the State System of Higher Education offers a diversified program for adult education in Portland, as it does throughout the State, principally through evening courses but also by correspondence and through other services.

NO DEFAULT

There is no record of default in the payment of principal of nor interest on any revenue bonds, revenue warrants or notes of the City of Portland.

CUSIP NUMBERS

It is anticipated that CUSIP identification numbers will be printed upon the Series B Bonds, but neither the failure to print such number on any Series B Bond nor any error with respect thereto shall constitute cause for a failure or refusal by the purchaser thereof to accept delivery of and pay for said Series B Bonds in accordance with the terms of the purchase contract.

LITIGATION

There is no litigation pending or, to the knowledge of the City, threatened, in any way questioning or affecting the validity of the Series B Bonds, or the power and authority of the City to fix and collect rates and charges for electric energy supplied by the City in amount sufficient to pay the principal of and interest on the Series B Bonds.

The City is engaged in routine litigation incidental to the conduct of its business. In the opinion of the City Attorney the aggregate amounts recoverable are not material.

TAX EXEMPTION

Interest on the Series B Bonds will be exempt, in the opinion of Ragen, Roberts, O'Scannlain, Robertson & Neill, Portland, Oregon, Bond Counsel, from Federal income taxation under existing statutes, regulations and administrative interpretations, except in the case of interest on any Series B Bond while said Series B Bond is held by a person who is a "substantial user" of the Project or a "related person" within the meaning of Section 103(b) (8) of the Internal Revenue Code. In the opinion of Bond Counsel interest is exempt, under existing statutes, from State of Oregon personal income taxes.

LEGAL OPINION

Ragen, Roberts, O'Scannlain, Robertson & Neill, Portland, Oregon, Bond Counsel, will render an opinion with respect to the validity of the Series B Bonds. No representation is made to the holders of the Series B Bonds that Bond Counsel has verified the accuracy, completeness or fairness of the statements in this Official Statement, and Bond Counsel assumes no responsibility to the holders of the Series B Bonds except for the matters that will be set forth in their opinion. Legal matters in connection with the Series B Bonds are further subject to the approval of the City Attorney of the City of Portland.

CERTIFICATE AS TO OFFICIAL STATEMENT

The City will provide to the successful bidder of the Series B Bonds a certificate, dated and delivered on the date of delivery of and payment for the Series B Bonds, attesting that on the date or such certificate (i) the descriptions and statements of or pertaining to the City contained in the Official Statement were and are true in all material respects; (ii) insofar as the City and its affairs, including its financial affairs, are concerned, this Official Statement did not and does not contain an untrue statement of a material fact or omit any statement or information which is necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading; and (iii) insofar as the descriptions and statements, including financial data, of or pertaining to other entities and their activities contained in this Official Statement are concerned, such descriptions, statements and data have been obtained from sources which the City believes to be reliable and the City has no reason to believe that they are untrue in any material respect.

The references herein to the various statutes of the State of Oregon, the City Charter, the Trust Indenture, Power Sales Agreements, and resolutions of the City Council with reference to the issuance of the Series B Bonds, are merely brief outlines of certain of the provisions thereof. Such outlines do not purport to be complete, and reference is made to all such documents for full and complete statements of such provisions. Copies of such documents are on file at the office of the Auditor.

CITY OF PORTLAND, OREGON

ATTEST:

APPENDIX A



ENGINEERING REPORT

City of Portland Bureau of Hydroelectric Power 1800 S.W. Sixth Avenue Portland, Oregon 97201 August 8, 1980 Subject: Portland Hydroelectric Project, Consulting Engineers Report

Dear Sir:

Presented herewith is our engineering report on the Portland Hydroelectric Project (the Project) with respect to the proposal by the City of Portland to issue a second series of Hydroelectric Power Revenue Bonds in the amount of \$17,000,000. The report includes a description of the major project equipment and facilities; a project summary schedule; a summary of the total project construction costs; and an analysis of the economic benefits to the City of Portland.

1. Background

The City water supply source from the Bull Run River was initially developed about 85 years ago and is the sole source of municipal water for Portland. Present pipeline capacity is estimated to be 225 million gallons per day. The City has developed 21 billion gallons of seasonal storage in impounding reservoirs at the Bull Run River Watershed.

The Bull Run Watershed is located outside the drainage area of any active Cascade volcanoes and is situated approximately 52 miles south of Mount St. Helens. The Columbia River forms a natural ground level barrier between the Washington Cascades (including Mount St. Helens) and the State of Oregon (including the Bull Run Watershed). During the recent volcanic activity on Mount St. Helens the Bull Run Watershed received only small amounts of ash which can be attributed to the prevailing wind patterns that are generally directed toward the East and Northeast.

Two existing dams form the primary reservoirs: Dam No. 1 is a concrete gravity dam with a water depth of about 170 feet, and Dam No. 2 is an earthfill dam (rock embankment shell and impervious core) with about 110 feet of water depth. Dam No. 1 was built between 1927 and 1929, and Dam No. 2 was built between 1959 and 1962. Each dam was designed and built to provide for the future addition of hydroelectric power facilities, including intakes, trash racks, and power penstocks.

2. Proposed Project

The Project consists of two powerhouses, one at each of the existing dams. Pertinent data for each powerhouse are summarized in Table 2-1.

Powerhouse No. 1 will be an indoor, reinforced concrete structure containing one 24-megawatt (MW) generator powered by a vertical-shaft Francis turbine. A water quality intake structure will be installed to allow withdrawal of water from various levels in the reservoir for use in the power turbine. This tower will allow the City to regulate the depth of withdrawal to protect against any adverse impact on water quality.

The operation of Powerhouse No. 1 will be scheduled to maximize the energy output; operation will be within the constraints defined in the plant operating license to limit daily variation in reservoir level to 2 feet for the purpose of hydroelectric power generation.

The substation for Powerhouse No. 1 will consist of low-side circuit breakers at a generator-voltage of 13,800 volts, a 13,800/60,000-volt, 25,000-kVA transformer, and fused disconnect switches on the high voltage side. The substation will be located immediately adjacent to the powerhouse and between the dam and the powerhouse.

Powerhouse No. 2 will be an indoor, reinforced concrete structure containing a single 12-MW generator driven by a vertical-shaft Kaplan turbine. The turbine at Powerhouse No. 2 will be operated to avoid extreme variations in outflow. The unit will normally be operated 7 days a week for 12 to 24 hours per day when water is available at loads ranging from 30 to 100 percent of rated output. During most years, it may be impractical to operate Powerhouse No. 2 during the summer months of July, August, and September because of low streamflow.

The substation will be located immediately adjacent to Powerhouse No. 2. This location is best suited to serve Powerhouse No. 2, the transmission line from Powerhouse No. 1, and the outgoing line. The substation will contain a 13,800/60,000-volt transformer, a low-side 13,800-volt circuit breaker, and a fused disconnect switch for the outgoing lines.

A single 57-kilovolt (kV) transmission line from Powerhouse No. 1 substation connects with the Powerhouse No. 2 substation and terminates at an existing bus position and high voltage breaker at the existing Portland General Electric Company (PGE) Bull Run substation. The transmission line is single-pole construction, with one top-mounted vertical insulator and two opposite-side horizontal insulators. A control and communication cable is carried below the line on the same poles.

The intake to the City water supply is located below the tailrace at Powerhouse No. 2; the Project will therefore always be operated to avoid any adverse effects on the quantity, quality, and reliability of the City of Portland's water supply.

Table 2-1

CITY OF PORTLAND HYDROELECTRIC PROJECT SUMMARY OF POWERHOUSE DATA

	Powerhouse No. 1	Powerhouse No. 2
GENERAL DATA	11	
Drainage Area (sq. miles)	75	102
Mean Annual Flow (1,000 acre-feet)	419	553
RESERVOIR DATA		
Normal Maximum Water Surface (feet MSL).	1,045	860
Normal Minimum Water Surface	980	820
Surface Area to Normal Maximum Water		
Surface (acres)	417	418
Normal Operating Storage (acre-feet)	20,000	14,000
DAM DATA		
Туре	Concrete Gravity	Rockfill, Impervious Core
Crest Elevation (ft. MSL)	1,050	875
Crest Length (ft.)	1,000	900
Crest Width (ft.)	18	25
Maximum Height—Streambed to Crest (ft.).	190	130
Normal Freeboard (ft.)	14	15
SPILLWAY DATA		
Type	Gated Ogee Overflow	Channel, Ogee Weir
Overall Width (ft.)	120	450
Crest Elevation (ft.)	1,036	860
Maximum Design Discharge (cfs)	21,000	30,000
POWER WATERWAYS		
Penstock Elevation, Centerline (ft.)	900	760
Intake Service Gate	2 each 90-inch Valves	2 each 14'x9' Wheels
Power Conduit Length (ft.)	250	1,100
Power Conduit Diameter	2 @ 8 feet	15 ft.
Rate Flow at Rated Head (cfs)	1,860	1,630
POWER PLANT DATA		
Туре	Indoor	Indoor
Number of Units	1	1
Maximum Static Head (ft.)	179	111
Average Annual Estimated Net Energy		
Production (40-year average)	60.1 million kWh	40.1 million kWh
Turbine Type	Francis	Kaplan
Elevation of Centerline in Distributor (ft.)	853	741
Generator Rating (kVA)	25,000	12,500
Crane Type and Rating	90-ton Bridge	75-ton Bridge
Transformer, OA Type	13.8/57 kV,	13.8/57 kV,
RPM	24/26.9 MVA	12/13.4 MVA
101 171 ································	212	257

3. Project Schedule

Project activities have been underway since November 1976 in the areas of licensing, engineering design, and equipment procurement. The Federal Energy Regulatory Commission (FERC) license was granted to the City on March 22, 1979. Equipment contracts have been awarded for all Owner-furnished equipment, including the turbines and generators, bridge cranes, and turbine guard valves. The construction of the access road and the transmission line has been completed and the construction of Powerhouses No. 1 and No. 2 is in progress and on schedule.

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air stà Blds were received from contractors for construction of the Water Quality Tower on July 15, 1980, and construction is scheduled to begin upon completion of this bond sale.

The schedule shown on Figure 3-1 illustrates the major activities and milestones on the Project. The primary activities shown are: engineering design; licensing; bond sale; right-of-way clearing; and construction of the access road, transmission line, powerhouse, and water quality tower. Milestones are identified on the schedule for major equipment deliveries, completion of significant construction activities, and unit testing and startup.

4. Project Costs

We have estimated that the capital cost of the facilities to be \$38,466,000 as shown in Table 4-1. Additional costs, such as the City's costs, interest during construction, the Debt Service Reserve Fund deposit requirement, accrued interest, financing expenses, Renewal and Replacement Fund deposit and Bond Discount, are defined in the Section "Application of Bond Proceeds" in the Official Statement.

The costs for major equipment procurement are all based on awarded contracts. Costs for the construction of Transmission Line, Access Road and Cofferdam, Pressure Reducing Station, and Rock Slide Protection are based on completed construction costs. Cost for construction of the powerhouses and Water Quality Inlet Tower are based on awarded contracts.

The total estimated project cost shown in Table 4-1 represents an increase of \$11,070,000 over the cost projections contained in our prior Engineering Report dated May 16, 1979. A detailed description of these additional costs are included in the Section "Portland Hydroelectric Project".

TABLE 4-1

PORTLAND HYDROELECTRIC PROJECT

PROJECT COST SUMMARY

JULY 1980

Project Activity	Total Estimated Cost ⁽¹⁾
Engineering and Construction Management Services	\$ 3,247,000
Inspection Services	
Equipment Procurement	
a. Turbines and Generators	5,669,000(2)
b. Turbine Guard Valves	. 670,000(2)
c. Bridge Cranes	. 481,000(2)
Constuction	
a. Transmission Line	. 1,847,000(3)
b. Access Road and Cofferdam	
c. Powerhouse No. 1	
d. Powerhouse No. 2	6,774,000(2)
e. Water Quality Inlet Tower	. 3,897,000(2)
f. Pressure Reducing Station	. 240,000(3)
g. Rock Slide Protection	. 54,000(3)
Subtotal	.\$33,927,000
Contingency	. 4,539,000(4)
Total Estimated Project Cost(5)	. \$38,466,000
Front Sty & Holdmann and Standard Strandard	

(1) Costs shown are gross nondiscounted cash flow and reflect actual contracted amounts for all equipment and construction.

(2) Contracts issued for equipment and construction.

(3) Completed construction.

(4) Contingency does not apply to completed construction.

(5) Additional project costs such as City's costs, interest during construction, and bond reserves are defined under Application of Bond Proceeds.

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5. Economic Benefits

The benefits of the Project can be measured by the revenue to the City of Portland from the sale of the entire output of the Project to the PGE as required by the Power Sales Agreement.

Pursuant to the Power Sales Agreement, PGE pays to the City an annual amount equal to the debt service on the Bonds, required payments for renewals and replacements, and the City's costs for insurance, permits and licenses, water quality testing and control, and the City's reasonable cost of administration of the Project. In addition, PGE is required to pay an amount equal to the share of the savings element and an amount equal to 10% of the debt service as adjusted for the actual annual energy output of the Project as defined in the Power Sales Agreement.

The payments PGE is expected to make to the City are summarized in Table 5-1 over the period of 1982 to 2016. It is estimated that in 1983 PGE will pay a total amount of \$5,882,720 to the City and an amount of \$271,000 for operation and maintenance costs. Using the average annual energy production of 100.2 million kWh, the cost of power to PGE from the Project is 61.4 mils per kWh in 1983.

Very				Payments For:	m . 4-1	
Year Ending	Power		Share	Renewals	City's	Total Annual
Septem- ber 30	Production Payment ⁽¹⁾	Debt Service ⁽²⁾	of the Savings ⁽³⁾	and Replacements ⁽⁴⁾	Reimbursable Expenses ⁽⁵⁾	Payments to City
1982	146,705	0	897,513	480,825	130,351	1,655,394
1983	461,716	4,617,163	0	519,291	284,550	5,882,720
1984	462,425	4,624,251	176,687	560,834	298,777	6,122,974
1985	462,333	4,623,326	0	605,701	313,716	6,005,076
1986	462,985	4,629,851	0	654,157	329,402	6,076,395
1987	462,790	4,627,901	559,878	706,490	345,872	6,702,931
1988	462,794	4,627,938	1,038,231	763,009	363,166	7,255,138
1989	464,950	4,649,501	1,309,867	824,050	381,324	7,629,692
1990	464,596	4,645,963	1,610,765	889,973	400,390	8,011,688
1991	463,349	4,633,488	1,739,626	961,171	420,410	8,218,044
1992	465,254	4,652,538	1,878,796	1,038,065	441,430	8,476,083
1993	464,056	4,640,563	2,029,100	1,121,110	463,502	8,718,331
1994	464,919	4,649,188	2,191,428	1,210,799	486,677	9,003,011
1995	463,179	4,631,788	2,3 6 6,742	1,307,663	511,011	9,280,383
1996	463,953	4,639,526	2,556,081	1,412,276	536,561	9,608,397
1997	464,531	4,645,313	2,760,568	1,525,258	563,389	9,959,060
1998	464,369	4,643,688	2,981,413	1,647,279	591,559	10,328,308
1999	466,465	4,664,651	3,219,926	1,779,061	621,137	10,751,240
2000	465,521	4,655,213	3,477,520	1,921,386	652,194	11,171,834
2001	463,739	4,637,388	3,755,722	2,075,097	684,803	11,616,749
2002	465,018	4,650,176	4,056,180	2,241,104	719,044	12,131,521
2003	465,093	4,650,925	4,380,674	2,420,393	754,996	12,672,080
2004	464,956	4,649,563	4,731,128	2,614,024	7 9 2,746	13,252,417
2005	46 6,570	4,665,700	5,109,618	2,823,146	832,383	13,897,417
2006	464,453	4,644,525	5,518,387	3,048 ,9 98	874,002	14,550,364
2007	464,978	4,649,775	5,959,858	3,292,917	917,702	15,285,230
2008	464,331	4,643,313	6,436,647	3,556,351	963,587	16,064,229
2009	463,468	4,634,675	6,951,579	3,840,859	1,011,766	1 6,9 02 , 346
2010	463,748	4,637,475	7,507,705	4,148,127	1,062,355	17,819,410
2011	291,950	2,919,500	8,108,321	4,479,978	1,115,473	16,915,221
2012	290,800	2,908,000	8,756,987	4,838,376	1,171,246	17,965,409
2013	291,275	2,912,750	9,457,546	5,225,446	1,229,808	19,116,825
2014	290,900	2,909,000	10,214,149	5,643,482	1,291,299	20,348,830
2015	289,075	2,890,750	11,031,281	6,094,960	1,355,864	21,661,930
2016	288,900	2,889,000	11 ,9 13 ,7 83	6,582,557	1,423,657	23,097,897

TABLE 5-1 PORTLAND HYDROELECTRIC PROJECT

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- (1) Avorage estimated net energy production for the standardized 40 year water flows based on the standardized 40 year water flows for the period 1928 through 1968 of 100,200,000 kWh.
- (2) Based on debt service contained in Section "Estimated Debt Service Requirements".
- (3) Based on estimated difference in cost per kWh between most recent PGE thermal plant and cost per kWh from project escalated at 8% annually.
- (4) Calculated at 11/4 % of direct project cost and 8% escalation in the Construction Cost Index.
- (5) City's cost of administration, water quality testing and control, permit and licenso fors, and insurance, escalated at 5% per year.

6. Conclusions and Recommendations

Based on our evaluation of the project and the material presented herewith, we have the following conclusions and recommendations:

- The Project is economically and financially feasible.
- The Project will not be detrimental to the City's high quality water supply. Precautions will be taken during construction and operation to preclude any adverse effects on the City's water supply.
- The overall environmental impact of the Project will not be significant, primarily because the impoundments are already in place, the scale of the Project is relatively small, and special precautions have been incorporated to protect against adverse impacts caused by construction and operation.
- The Project will consist of a single 12-MW plant at Dam No. 2 and a single 24-MW plant at Dam No. 1. Transmission lines will carry the power at 57,000 volts to PGE's Bull Run substation.
- Net energy production from the project will be about 100.2 million kWh with average year hydrology, about 82 million kWh in a critical year, and about 127 million kWh in a wet year.
- Dependable capacity of Powerhouse No. 1 will coincide with the nominal full-rated capacity of 24 MW. Powerhouse No. 2 will attain its 12-MW full-rated capacity only during average year winter and spring hydrologic conditions.
- Based on extrapolation of cost indexes and a cash flow relative to the Project schedule, we estimate the Project's costs to be \$38,466,000, excluding City costs, interest during construction, the Debt Service Reserve Fund Requirement deposit, accrued interest, financing expenses, the Renewal and Replacement Fund deposit, and bond discount.
- Benefits to be derived from the Project include the development of a valuable source of energy that would otherwise continue to go to waste. In addition, the sale of power produced by the Project will provide the City with a net annual income.
- As a result of the study, and considering the above conclusions, we recommend that the City proceed with the Project.

In addition to the information contained in this report, we have furnished you with information for use in the Official Statement under the following captions: "Future Marketability of Power Produced," and "Portland Hydroelectric Project."

It is our opinion that the information contained in this report and under the above-mentioned captions is correct.

Respectfully submitted,

CH2M HILL

APPENDIX B

PORTLAND GENERAL ELECTRIC COMPANY

General

Portland General Electric Company, incorporated in Oregon in 1930, is an electric utility engaged in the generation, purchase, transmission, distribution and sale of electricity in the State of Oregon. The Company's service area is 3,350 square miles, including 54 incorporated cities of which Portland (also partially served by Pacific Power & Light Company) and Salem are the largest, within a Stateapproved service area allocation of 4,250 square miles. The Company estimates that the population of its service area at the end of 1979 was approximately 1,000,000. At December 31, 1979, the Company served about 480,000 customers, constituting approximately 40 percent of the State's electric customers.

Problems of the Industry

The Company has been experiencing, in varying degrees, certain problems which are general in the electric utility industry, including (1) the difficulty in obtaining, on a timely basis, rate relief necessary for an adequate return on invested capital (see "Regulation—Rates"), (2) the reaction to the accident at Three Mile Island in Pennsylvania (see "Business—Future Resources"), (3) the difficulty in financing a large construction program on terms and at costs of capital historically considered reasonable by the industry and within limitations on financing imposed by charters and indentures (see "Construction and Financing Program"), (4) the restrictions and delays on operations and construction attributable to environmental considerations and the activities of environmental groups (see "Business—Future Resources", "Business—Litigation" and "Regulation—Environmental Matters"), (5) the necessity of expending substantial sums of money and making substantial commitments for future nuclear and other facilities prior to obtaining all requisite regulatory approvals (see "Business—Future Resources"), (6) the effects of energy conservation (see "Business—General"), (7) and the difficulty of obtaining adequate supplies of fuel at reasonable prices (see "Business—Fuel Supply").

In addition, difficulties in obtaining the requisite federal and state regulatory approvals for nuclear projects have resulted in and will continue to result in substantial delays of the projects being sponsored by the Company or in which the Company has an interest. These delays will in all probability result in substantial cost increases and may result in relocation of the projects to alternate sites or even cancellation of some of such projects. If any such projects should ultimately be relocated or cancelled, the Company may be required to write off a portion of its investment in such projects. (See "Business — Future Resources—Pebble Springs and Skagit Projects" and "Construction and Financing Program.")

Recent Development

The Trojan Nuclear Plant, in which the Company has a 67½ percent interest, has a demonstrated capability of 1080 megawatts and is expected to supply approximately 25 to 30 percent of the Company's annual energy requirements. In mid-March 1978, the Trojan Plant was shut down for its first refueling and annual maintenance and inspection, scheduled to require 8 weeks. In April 1978, Bechtel Power Corporation ("Bechtel"), designers of the Trojan Plant, advised the Company that the plant control building did not meet original design specifications for resistance to earthquakes. Bechtel concluded, however, that the control building would retain its functional capability under all seismic design loads and that the plant could be operated while the building was modified. These findings were reviewed and affirmed by the staff of the Nuclear Regulatory Commission ("NRC"). An Atomic Safety and Licensing Board ("ASLB") was established to conduct public hearings on the matter. The plant remained shut down until the completion of the hearings, and on December 22, 1978, the ASLB issued a license amendment permitting full power operation of the Trojan Plant during implementation of the plant modifications. On January 2, 1979, the plant returned to operation.

The ASLB continued to investigate the noncompliance of the Trojan Plant with its original design specifications for resistance to earthquakes and to review the implementation of required plant modifications. The ASLB completed reviewing such modifications as proposed by the Company and its principal engineer, Bechtel, and on July 11, 1980 it issued a decision that approved the proposed modifications. The order requires the modifications to be completed within one year and allows the plant to operate while the majority of modifications are implemented. The plant will have to be shut down for completion of one of the final phases of the modifications but it is possible that phase can be completed while the plant is down for its scheduled refueling in the spring of 1981.

On February 8, 1979, the Company and another joint owner of the Trojan Plant filed suit in the United States District Court for the District of Oregon seeking to recover from Bechtel all costs associated with any such modification, as well as the Company's excess power costs of \$26 million but there can be no assurance that the Company will be able to do so. (See "Business—Litigation").

On October 12, 1979, the Trojan Plant was taken out of service in order to repair leaks in tubes in two of the plant's four steam generators. While the plant was out of service, in response to an industry-wide request by the NRC, the Company began an investigation of the adequacy of supports for piping systems in the plant and found that some of the supports were inadequate. The repair of the leaking tubes and correction of the inadequate supports for the piping systems were completed in late December, and the Trojan Plant returned to service on December 31. Prior to the resumption of operation of the Trojan Plant, the ASLB required hearings, and an extensive review of the corrective measures was conducted by the NRC staff.

During the periods that the 'Trojan Plant was out of service, the Company was able to maintain service to its customers through the purchase and borrowing of power from other sources and through use of combustion turbines at its Beaver, Bethel and Harborton plants. Most of the power purchased by the Company, as well as the power generated by the Company's combustion turbines, was at costs greatly in excess of the incremental generation costs of the Trojan Plant or the base cost of power included in the Company's general tariffs.

The Trojan Plant was shut down for refueling, inspection and maintenance on April 17, 1980. In addition, the Company is undertaking to make certain modifications in the masonry walls of the Trojan Plant's auxiliary building complex to achieve certain design objectives established by the NRC Staff when it permitted the Plant to resume operation in December 1979. Such modifications have been completed to the satisfaction of the NRC Staff and the Plant has returned to full power. While the Trojan Plant was shut down, the Pacific Northwest experienced favorable hydro conditions, and as a result, the Company was able to replace substantially all Trojan generation with low-cost secondary hydro and did not need to operate its combustion turbines or purchase or borrow substantial amounts of high-cost power from other sources.

The Trojan plant is expected to be shut down for up to four weeks in November 1980 to install reactor and containment level instrumentation, required as a result of the Three Mile Island accident, and to complete fire protection modifications required by the NRC.

Rates

On June 1, 1979, the Company filed an application with the Public Utility Commissioner of Oregon (the "PUC") for an overall rate increase of 21.1 percent, which also contained a tariff for a permanent power cost adjustment clause. On September 10, 1979, the Staff of the PUC (the "Staff") recommended that the Company be allowed a current 9.2 percent rate increase, but recommended disapproval of the power cost adjustment. The Staff further recommended that the Boardman Coal Plant, in which the Company has an 80 percent interest, be excluded from the Company's electric rate tariffs until it becomes operational—currently estimated for August 1980. An additional 19.7 percent rate increase at that time was recommended by the Staff.

The Company accepted the Staff exclusion of Boardman and agreed to file separate tariffs when Boardman becomes operational. In accepting the exclusion of Boardman, the Company modified its case and included more recent cost data which resulted in the Company's request being revised to a 19.75 percent increase.

The PUC segregated the power cost adjustment issue, and after hearings on this issue, on November 15, 1979 entered an order for a permanent power cost adjustment tariff. This tariff permits a centsper-kWh additional charge for the quarter in which excess costs are expected to be incurred, but allows only 80 percent of eligible costs to be recovered by the Company. Such eligible costs include increases in the unit cost (relative to the base cost included in existing general tariffs) of natural gas, oil and purchased power. Over time, the power adjustment should recover a majority of any excess power costs when the Trojan Plant is operating and a significant portion, although less than 50 percent, when it is not operating. No monthly charge greater than 0.4 cents per kWh will be billed for the excess power costs. However, eligible excess power costs over 0.4 cents per kWh will be placed in a deferred power cost adjustment account and will be amortized in the rates charged to customers in subsequent quarters, subject to the overall maximum rate per kWh.

On January 14, 1980, the PUC issued an order that granted the Company an initial rate increase of 17.7 percent. In the order, the PUC recognized the increased risk that is now attendant to utility operation and authorized a 15.17 percent rate of return on common equity and an 11.15 percent return on rate base. In addition, the order authorized a rate increase to take effect on July 1, 1980 to cover the Bonneville Power Administration wholesale rate increase. (See "Regulation—Rates.")

CONSTRUCTION AND FINANCING PROGRAM

During the years 1975 through 1979, gross property additions, including allowance for funds used during construction ("ADC") but net after reimbursement by others of a portion of the Company's prior years' construction expenditures, approximated \$1,090,000,000 and gross property retirements approximated \$32,000,000.

The cost of the Company's 1979 construction program was \$254,000,000 including ADC of \$60,000,000. To finance this program, during 1979 the Company issued and sold 5,000,000 shares of Common Stock for net proceeds of \$86,575,000 and PGE N.V. sold \$50,000,000 of notes in the Eurodollar market. In addition, the Company entered into a sale-leaseback of the coal handling facilities located at the Boardman Plant which resulted in net proceeds received of \$20,000,000 in November 1979 and an additional \$11,000,000 in January 1980 and borrowings under the Trojan fuel trusts were increased by approximately \$26,000,000. Additionally, short-term borrowings increased \$59,000,000.

The cost of the Company's 1980 construction program is estimated at \$300,000,000 to \$325,000,000 (including ADC of \$75,000,000). The Company's construction program is estimated to be in the range of \$575,000,000 to \$650,000,000 (including ADC of \$130,000,000 to \$140,000,000) total for the years 1981-82. Approximately 66 percent of this estimate is for generating plant facilities and the remainder for transmission, distribution and general facilities. The above construction costs for the period of 1980-82 are less than those previously estimated by the Company, primarily as a result of continuing delays in the commencement of on-site construction of the Pebble Springs, Skagit and Colstrip generating projects. In addition, such construction cost estimates are based on the Company's present plans for joint ownership of certain future generating facilities and present construction schedules and are subject to further revision as a result of changes in such plans and schedules and as a result of various other factors as set forth under "Business—Future Resources".

The Company expects that on the average during the three years 1980-82, approximately 85 to 90 percent of its cash construction costs will require external financing including the sale of additional debt and equity securities. The Company sold 4,000,000 shares of Common Stock for net proceeds of \$55,340,000 in January 1980, \$55,000,000 of 13.25% First Mortgage Bonds in February 1980, and \$50,000,000 of 14.75% Notes in the Eurodollar market in May 1980. The Company is presently negotiating the sale of approximately \$60,000,000 of First Mortgage Bonds for August 1980 and may sell additional First Mortgage Bonds and issue additional shares of Common Stock later in 1980.

Under the provisions of the Company's Articles of Incorporation, the issuance of additional Preferred Stock requires, among other things, that gross income (as defined) for 12 consecutive months within the preceding 15 months be at least equal to $1\frac{1}{2}$ times the aggregate annual interest requirements on all debt securities and annual dividend requirements on all shares of Preferred Stock to be outstanding. The Company is presently unable to issue any additional shares of Preferred Stock and anticipates that this condition will continue throughout most of 1980.

Under the terms of the Mortgage securing the Company's First Mortgage Bonds, the issuance of additional First Mortgage Bonds, except for certain refunding operations, is subject to net earnings

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available for interest (which, in the opinion of counsel, include allowance for funds used during construction) for 12 consecutive months within the preceding 15 months being at least twice the annual interest requirements on all bonds to be outstanding.

The Company's future ability to meet the earnings coverage provisions necessary to issue additional First Mortgage Bonds or Preferred Stock depends primarily on the adequacy and timing of future rate relief. If the Company were unable to issue adequate amounts of additional securities, it would consider reducing its construction program through the sale of partial interests in future generating units and/or the delay in the construction of future facilities, which could impair the quality and reliability of services to its customers.

INTERIM RESULTS

The following information is presented for the 12 months ended June 30, 1980 and December 31, 1979. The June 30, 1980 amounts are unaudited but, in the opinion of the Company, include all adjustments (consisting only of normal accruals) necessary for a fair presentation.

	June 30, 1980	December 31, 1979
	(Thousand	ls of Dollars)
Operating Revenues	\$399,316	\$349,981
Operating Expenses	328,854	284,692
Operating Income	70,462	65,289
Allowance for Funds Used During Construction	72,090	60,015
Interest on Borrowings	92,698	(80,452)
Other Income—Net	(575)	1,270
Net Income	\$ 49,279	\$ 46,122
Earnings per Average Common Share	\$1.06	\$1.06

CONSOLIDATED STATEMENTS OF INCOME

The consolidated statements of income for each of the 5 years ended December 31, 1979 have been examined by Arthur Andersen & Co., independent public accountants, as stated in their report included elsewhere in this Appendix. Reference is made to said report which calls attention to the change in the method of recording revenues. These statements should be in conjunction with the Financial Statements and Notes to Financial Statements included elsewhere in this Appendix, all of which are an integral part of these statements, and with Management's Discussion and Analysis of Statements of Income which follows.

$ \begin{array}{c c c c c c c c c c c c c c c c c c c $					Years	sЕ	nded Decem	ber	31		
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $			1979		1978		1977		1976		1975
		·			(Th	ou	sands of Dol	lars)		
Purchased Power 75,111 76,111 40,619 31,028 41,83 Production 69,522 23,704 30,239 15,093 9,00 Transmission and distribution 12,805 11,672 9,829 8,659 8,87 Administrative and other 38,728 33,914 29,248 23,739 18,65 Maintenance and repairs 18,418 13,313 12,895 8,897 7,11 Depreciation (Note 1) 33,642 31,587 28,159 22,112 13,81 Taxes other than income taxes 24,166 24,280 23,951 20,972 16,91 Taxes on income (Notes 1 and 2) 12,200 4,968 5,006 4,510 11,41 Operating Income 65,289 83,239 73,127 82,677 62,10 Other Income 12,270 5,325 541 988 (6 Cher income and deductions 1,270 5,325 541 988 (6 Interest on long-term debt 70,326 58,206 46,528 40,711 84,54 Interest on short-term borrowings 9,096		\$	349,981	\$	303,678	\$	253,073	\$	217,787	\$	179,942
Production 60,522 $23,744$ $30,239$ $15,093$ $9,00$ Transmission and distribution 12,805 $11,672$ $9,829$ $8,859$ $8,859$ Administrative and other $38,728$ $33,014$ $29,248$ $23,639$ $18,56$ Maintenance and repairs $18,418$ $13,311$ $12,896$ $8,897$ $7,11$ Depreciation (Note 1) $33,642$ $31,687$ $28,169$ $22,112$ $13,887$ Taxes on income (Notes 1 and 2) $12,300$ $4,068$ $5,066$ $4,610$ $1,44$ Operating Income $65,289$ $83,239$ $73,127$ $82,677$ $62,10$ Other Income $1,270$ $5,325$ 541 988 $(6$ Interest Charges $1,270$ $5,325$ 541 988 $(6,2)$ Interest on long-term debt $1,030$ $1,183$ 846 899 3 Allowance for borrowed funds used $1,030$ $1,183$ 846 899 3 Interest Charges $1,030$ $1,183$ 846 899 3	Purchased Power		75,111		76,911		40,619		31,028		41,821
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$			69,522		23,794		30,239		15,093		9,087
Administrative and other $38,728$ $33,914$ $29,248$ $22,639$ $88,67$ $7,11$ Depreciation (Note 1) $33,642$ $31,587$ $22,159$ $22,212$ $13,88$ Taxes other than income taxes $24,166$ $24,280$ $23,951$ $20,972$ $16,91$ Taxes on income (Notes 1 and 2) $12,300$ $4,968$ $5,006$ $4,510$ $117,77$ Operating Income $65,289$ $83,239$ $73,127$ $82,677$ $62,10$ Other Income $244,692$ $220,439$ $179,946$ $135,110$ $117,77$ Other Income and deductions $1,270$ $5,325$ 541 988 $(6.2),757$ Other income and deductions $1,270$ $5,325$ 541 988 $(6.6),758$ Interest on long-term debt $70,326$ $58,206$ $48,528$ $40,711$ $28,715$ Interest on long-term debt $9,096$ $8,973$ $4,794$ $5,447$ $9,2$ Other increast and amortization $1,030$ $1,123$ 846 899 3 Allowance for borrowed funds used d			12,805		$11,\!672$		9,829		8,859		8,824
Maintenance and repairs 18,418 13,313 12,895 8,897 7,11 Depreciation (Note 1) 33,642 31,687 28,159 22,112 13,81 Taxes other than income taxes 24,166 24,260 23,951 20,972 16,91 Taxes on income (Notes 1 and 2) 12,300 4,968 5,006 4,510 1,44 Qperating Income 65,289 83,239 73,127 82,677 62,10 Other Income 65,289 83,239 73,127 82,677 62,10 Other Income and deductions 1,270 5,325 541 988 (6 Other income and deductions 1,270 5,325 541 988 (6 Interest Charges 70,326 58,206 48,528 40,711 28,5 Interest on long-term debt 1,030 1,183 846 899 3 Allowance for borrowed funds used (32,570) (19,524) (12,399) (11,053) (16,2 Utring construction (Note 1) (32,570) (19,524) (12,399) (11,053) (16,2 Income Before Cumulati	Administrative and other		38,728		33,914		29,248		23,639		18,514
$\begin{array}{c c c c c c c c c c c c c c c c c c c $			18,418		13,313		12,895		8,897		7,194
Taxes other than income taxes 24,166 24,280 23,951 20,972 16,91 Taxes on income (Notes 1 and 2) 12,300 4,968 5,006 4,510 1,43 284,692 220,439 179,946 135,110 117,77 Operating Income 65,289 83,239 73,127 82,677 62,10 Other Income 65,289 83,235 5,089 4,360 6,3 Other Income 1,270 5,325 541 988 (6) 20,112 14,383 5,630 5,344 5,66 Interest Charges 1,270 5,325 541 988 (6) Interest on long-term debt 70,326 58,206 48,528 40,711 28,5 Interest and amortization 1,030 1,183 846 899 3 Allowance for borrowed funds used 47,882 48,838 41,759 36,004 21,8 Income Before Cumulative Effect of Change in Accounting Policy 46,122 48,784 36,988 52,021 46,0 Cumulative Effect to January 1, 1978 of Accruing 13,830			33,642		31,587		28,159				13,890
$\begin{array}{ c c c c c c c c c c c c c c c c c c c$			24,166		24,280		23,951		20,972		16,957
$\begin{array}{ c c c c c c c c c c c c c c c c c c c$	Taxes on income (Notes 1 and 2)		12,300		4,968		5,006		4,510		1,493
Other Income Allowance for equity funds used during construction (Note 1)			284,692		220,439		179,946		135,110		117,780
$\begin{array}{c} construction (Note 1)$			65,289		83,239		73,127		82,677		62,162
Other income and deductions $1,270$ $5,325$ 541 988 (6) $28,715$ $14,383$ $5,630$ $5,348$ $5,66$ Interest Charges $70,326$ $58,206$ $48,528$ $40,711$ $28,515$ Interest on short-term borrowings $9,096$ $8,973$ $4,794$ $5,447$ $9,2$ Other interest and amortization $1,030$ $1,183$ 846 899 3 Allowance for borrowed funds used $(12,570)$ $(19,524)$ $(12,399)$ $(11,053)$ $(16,2)$ Income Before Cumulative Effect of Change in Accounting Policy $46,122$ $48,784$ $36,988$ $52,021$ $46,0$ Cumulative Effect to January 1, 1978 of Accruing Estimated Unbilled Revenues-Less Income $-7,845$ $ -$ Net Income $53,603$ (Note 1) $ 7,845$ $ -$ Net Income Available for Common Stock $$32,2292$ $$42,454$ $$23,331$ $$40,209$ $$36,11$ Average Common Shares Outstanding $30,403,911$ $24,709,977$ $$21,414,344$ $$17,687,431$ $$14,333,3$	Allowance for equity funds used during										
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	construction (Note 1)						•				6,317
Interest Charges 70,326 58,206 48,528 40,711 28,5 Interest on short-term borrowings 9,096 8,973 4,794 5,447 9,2 Other interest and amortization 1,030 1,183 846 899 3 Allowance for borrowed funds used (32,570) (19,524) (12,399) (11,053) (16,2 uring construction (Note 1) (32,570) (19,524) (12,399) (11,053) (16,2 Income Before Cumulative (32,570) (19,524) (12,399) (11,053) (16,2 Effect of Change in Accounting Policy 46,122 48,784 36,988 52,021 46,0 Cumulative Effect to January 1, 1978 of Accruing - - - - - Estimated Unbilled Revenues-Less Income - 7,845 - - - Net Income 13,830 14,175 13,657 11,812 9,8 Income Available for Common Stock \$32,292 \$42,454 \$23,331 \$40,209 \$36,11 Average Common Shares Outstanding 30,403,911 24,709,977 21,414,344 17,687,431	Other income and deductions		1,270		5,325		541		988	,	(641)
Interest on long-term debt			28,715		14,383		5,630	· <u></u>	5,348	<u>.</u>	5,676
Interest on short-term borrowings 9,096 8,973 4,794 5,447 9,2 Other interest and amortization 1,030 1,183 846 899 3 Allowance for borrowed funds used during construction (Note 1) (32,570) (19,524) (12,399) (11,053) (16,2 47,882 48,838 41,769 36,004 21,8 Income Before Cumulative Effect of Change in Accounting Policy 46,122 48,784 36,988 52,021 46,0 Cumulative Effect to January 1, 1978 of Accruing Estimated Unbilled Revenues-Less Income Taxes of \$8,503 (Note 1) 7,845 - - Not Income - 7,845 - - - Not Income - 7,845 - - - Not Income - - 7,845 - - - Income Available for Common Stock \$32,292 \$42,454 \$23,331 \$4,0209 \$36,11 Average Common Shares Outstanding - - 30,403,911 24,709,977 21,414,344 17,687,431 14,333,33 Earnings Per Average Common Share- - - - <t< td=""><td>Interest Charges</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>	Interest Charges										
Other interest and amortization 1,030 1,183 846 899 3 Allowance for borrowed funds used during construction (Note 1) (32,570) (19,524) (12,399) (11,053) (16,2 47,882 48,838 41,769 36,004 21,8 Income Before Cumulative Effect of Change in Accounting Policy 46,122 48,784 36,988 52,021 46,0 Cumulative Effect to January 1, 1978 of Accruing Estimated Unbilled Revenues-Less Income Taxes of \$8,503 (Note 1) - <td></td> <td></td> <td></td> <td></td> <td>•</td> <td></td> <td></td> <td></td> <td>-</td> <td></td> <td>28,519</td>					•				-		28,519
Allowance for borrowed funds used during construction (Note 1) (32,570) (19,524) (12,399) (11,053) (16,2) $47,882$ $48,838$ $41,769$ $36,004$ $21,8$ Income Before Cumulative Effect of Change in Accounting Policy $46,122$ $48,784$ $36,988$ $52,021$ $46,0$ Cumulative Effect to January 1, 1978 of Accruing Estimated Unbilled Revenues-Less Income Taxes of \$8,503 (Note 1) $ -$ Net Income $52,021$ $56,629$ $36,988$ $52,021$ $46,0$ Preferred Dividend Requirement $13,830$ $14,175$ $13,657$ $11,812$ $9,8$ Income Available for Common Stock $$32,292$ $$42,454$ $$23,331$ $$40,209$ $$$36,11$ Average Common Shares Outstanding $30,403,911$ $24,709,977$ $21,414,344$ $17,687,431$ $14,333,33$ Earnings Per Average Common Share– Before Cumulative Effect of Change in Accounting Policy $$1.06$ $$1.40$ $$1.09$ $$2.27$ $$2.$ Cumulative Effect to January 1, 1978 of Accruing Estimated Unbilled Revenues-Net $.32$ $ -$	Interest on short-term borrowings						•				9,211
$\begin{array}{c c c c c c c c c c c c c c c c c c c $			1,030		1,183		846		899		347
47,882 48,838 41,769 36,004 21,8 Income Before Cumulative Effect of Change in Accounting Policy			(32, 570)		(19,524)		(12,399)		(11,053)		(16,242)
Effect of Change in Accounting Policy $46,122$ $48,784$ $36,988$ $52,021$ $46,0$ Cumulative Effect to January 1, 1978 of Accruing Estimated Unbilled Revenues-Less Income $ -$	-		47,882		48,838		41,769		36,004	titude ou	21,835
Cumulative Effect to January 1, 1978 of Accruing Estimated Unbilled Revenues-Less Income -	Income Before Cumulative										
Taxes of \$8,503 (Note 1) - </td <td>Cumulative Effect to January 1, 1978 of Accruing</td> <td></td> <td>46,122</td> <td></td> <td>48,784</td> <td></td> <td>36,988</td> <td></td> <td>52,021</td> <td></td> <td>46,003</td>	Cumulative Effect to January 1, 1978 of Accruing		46,122		48,784		36,988		52,021		46,003
Net Income \$ 46,122 \$ 56,629 \$ 36,988 \$ 52,021 \$ 46,0 Preferred Dividend Requirement 13,830 14,175 13,657 11,812 9,8 Income Available for Common Stock \$ 32,292 \$ 42,454 \$ 23,331 \$ 40,209 \$ 36,11 Average Common Shares Outstanding 30,403,911 24,709,977 21,414,344 17,687,431 14,333,33 Earnings Per Average Common Share– Before Cumulative Effect of Change in \$1.06 \$1.40 \$1.09 \$2.27 \$2. Cumulative Effect to January 1, 1978 of Accruing Estimated Unbilled Revenues–Net					7.845				_		_
Preferred Dividend Requirement13,830 $14,175$ 13,657 $11,812$ 9,8Income Available for Common Stock\$ 32,292\$ 42,454\$ 23,331\$ 40,209\$ 36,1Average Common Shares Outstanding $30,403,911$ $24,709,977$ $21,414,344$ $17,687,431$ $14,333,3$ Earnings Per Average Common Share- Before Cumulative Effect of Change in Accounting Policy $$1.06$ $$1.40$ $$1.09$ $$2.27$ $$2.77$ Cumulative Effect to January 1, 1978 of Accruing Estimated Unbilled Revenues-Net $.32$ $ -$		\$	46 122	\$		ŝ	36,988	\$	52.021	\$	46,003
Average Common Shares Outstanding 30,403,911 24,709,977 21,414,344 17,687,431 14,333,3 Earnings Per Average Common Share— Before Cumulative Effect of Change in Accounting Policy 14,333,3 Accounting Policy \$1.06 \$1.40 \$1.09 \$2.27 \$2. Cumulative Effect to January 1, 1978 of		Ŧ		*			•			+	9,818
Earnings Per Average Common Share— Before Cumulative Effect of Change in Accounting Policy Accounting Policy Cumulative Effect to January 1, 1978 of Accruing Estimated Unbilled Revenues—Net	Income Available for Common Stock	\$	32,292	\$	42,454	\$	23,331	\$	40,209	\$	36,185
Accounting Policy \$1.06 \$1.40 \$1.09 \$2.27 \$2. Cumulative Effect to January 1, 1978 of Accruing Estimated Unbilled Revenues-Net - .32 - -	Earnings Per Average Common Share-	3	0,403,911	24	1,709,977		21,414,344	1	17,687,431	1	4,333,333
Accruing Estimated Unbilled Revenues-Net	Accounting Policy		\$1.06		\$1.40		\$1.09		\$2.27		\$2.52
	• ,				.32				-		_
Earnings Per Average Common Share $\$1.06$ $\$1.72$ $\$1.09$ $\$2.27$ $\$2.27$	Earnings Per Average Common Share		\$1.06		\$1.72		\$1.09		\$2.27		\$2.52
			•								\$1.58 \$1.565

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MANAGEMENT'S DISCUSSION AND ANALYSIS OF STATEMENTS OF INCOME

Net income and earnings per share for 1979 decreased from 1978 primarily as a result of excess power costs incurred during the second half of the year. Significant increases in revenues (11.6 percent rate increase in January 1979) and ADC were more than offset by the Company's inability to recover rapidly escalating power costs. The combination of poor hydro conditions beginning in August and the outage of the Trojan Nuclear Plant for repairs from mid-October until December 31, together with higher costs of fossil fuels and purchased power, resulted in excess power costs of approximately \$60 million. Of this amount, \$15 million was recovered under a permanent power cost adjustment tariff granted by the Public Utility Commissioner of Oregon effective November 15, 1979. Although this tariff will enable the Company to recover a significant portion of excess power costs in the future, it did not apply to costs incurred prior to November 15.

The 1978 net income and earnings per share increased over 1977 primarily from an increase in rates and a change in accounting policy (Note 1). These increases were offset in part by the Trojan Nuclear Plant being out of service under order of the NRC from late June 1978 until January 1979, after it was determined that the design of the control building did not fully meet earthquake resistance standards stated in the plant's operating license. Trojan had been expected to supply approximately one-third of the Company's energy requirements during 1978. It was necessary to replace this lost generation with power at costs greatly in excess of Trojan's incremental costs. This resulted in increasing power costs by approximately \$26 million for the year 1978, including approximately \$20 million during the fourth quarter.

During 1977 the Pacific Northwest experienced the worst drought in its history and the resulting extremely unfavorable hydro conditions increased the Company's power costs more than \$16 million above those anticipated for the year. Of this amount only \$4 million was recovered through a rate surcharge. This contrasts with the extremely favorable hydro conditions which prevailed during the first 8 months of 1976, reducing power costs during that period. As a result of these factors, and the timing and amount of general rate relief granted during 1977, earnings per share for 1977 were significantly less than earnings per share for 1976.

The following discussion relates to other significant factors affecting results of the Company's operations for 1977, 1978 and 1979.

Operating revenues have increased primarily as a result of the following rate increases:

September 1976—a 17.2 percent general rate increase.

September 1977—an excess power cost surcharge of 2.2 mills per kWh from September 1 through December 1.

November 1977—a 12.6 percent general rate increase.

January 1979 — an 11.6 percent general rate increase.

November 1979—a power cost adjustment surchage of 4.0 mills per kWh from November 15.

In addition, operating revenues increased in 1978 due to sales to other utilities.

Purchased power costs vary from year to year upon the availability of low cost hydro power. The increase in 1977 resulted primarily from the drough t which required substantial purchases of higher cost thermal power during the period from April through December to replace hydro power normally available. The increase in 1978 is a result of the Company purchasing excess hydro power for resale to other utilities and replacement power from August through December due to the Trojan shutdown. These costs continued at the same level during 1979 because of the poor hydro conditions and the Trojan outage.

Production expense increased in 1977 primarily as a result of Trojan Nuclear Plant, which was placed in commercial operation during 1976. In addition, 1977 production expenses increased as a result of the drought. The decrease in 1978 resulted from the Trojan shutdown. The increase in 1979 reflects substantial usage of the Company's oil and gas fired combustion turbines to offset poor hydro conditions and the outage of Trojan.
Administrative and other expenses have increased primarily due to the effect of inflation, the increase in the number of customers and increases in the number and wages of employees.

Maintenance and repairs and depreciation expenses have increased primarily as a result of the increase in utility plant in-service, including the Trojan Nuclear Plant which was declared available for commercial operation in May 1976. In addition, maintenance and repairs increased in 1979 as a result of a severe ice storm in January and repairs to Trojan during the above-mentioned outage.

Taxes on income increased in 1977 and 1979 and decreased in 1978. Changes in federal and state income taxes are generally related to changes in income before income taxes. See Note 1 for the Company's income tax accounting policies and Note 2 for details of taxes on income.

Allowance for funds used during construction (ADC) increased as a result of increases in the Company's construction work in progress. In addition, 1979 was affected by an increase in the ADC rate for all construction expenditures, and 1978 was affected by an increase in the ADC rate for certain projects effective November 15, 1977 (Note 1).

Interest on long-term and short-term borrowings have increased as substantial long-term debt financings and the use of short-term borrowings have been required to support the Company's construction program. In addition, long- and short-term interest rates were higher during 1979.

OPERATING STATISTICS

		31			
	1979	1978	1977	1976	1975
Operating Revenues		(The	ousands of Dollars	3)	
(Thousands of Dollars):					
Sales of electric energy:					
Residential	\$ 159,135	\$ 143,829	\$ 130,052	\$ 109,571	\$ 88,351
Commercial and small industrial	96,462	77,000	64,695	56,027	53,628*
Large industrial	72,839	52,662	47,721	39,654	24,504*
Government and municipal	5,645	5,466	4,464	4,030	3,687
Total sales to ultimate customers.	334,081	278,957	246,932	209,282	170,170
Sales for resale	12,131	18,080	3,609	5,462	4,561
Total sales of electric energy	346,212	297,037	250,541	214,744	174,731
Other electric revenues	3,769	6,641	2,532	3,043	5,211
Total clectric operating revenues.	<u>\$ 349,981</u>	<u>\$ 303,678</u>	<u>\$ 253,073</u>	<u>\$ 217,787</u>	<u>\$ 179,942</u>
Energy Sales (Thousands of kWh):			4 9 9 9		· · · · · · · · · · · · · · · · · · ·
Residential	5,731,380	5,364,983	5,120,266	5,024,199	4,982,113
Commercial and small industrial	3,710,803	3,402,784	3,175,207	3,045,522	3,169,091*
Large industrial	3,584,594	3,251,446	3,484,780	3,438,963	2,699,326*
Government and municipal ,	112,370	112,535	109,570	106,835	103,362
Total sales to ultimate customers.	13,139,147	12,131,748	11,889,913	11,615,519	10,953,892
Sales for resale	513,158	1,173,394	44,010	393,948	529,753
Total sales of electric energy	\$13,652,305	\$13,305,142	\$11,933,923	\$12,009,467	\$11,483,645
Number of Customers (12-month			<u>,</u>	······································	
average):					
Residential	414,911	398,631	380,539	364,410	352,355
Commercial and small industrial	53,138	51,086	48,558	46,585	45,088*
Large industrial	187	190	193	189	105*
Government and municipal	1,362	1,387	1,415	1,369	1,374
Total ultimate customers	469,598	451,294	430,705	412,553	398,922
Sales for resale	2			3	3
Total electric customers	469,600	451,297	430,707	412,556	398,925
Average Annual Use and	-				
Revenue per Residential Customer:					
Use (kWh)	13,814	13,459	13,455	13,787	14,139
Revenue	\$ 383.54	\$ 360.81	<u>\$ 341.76</u>	\$ 300.68	\$ 250.74
Average Revenue per kWh:					
Residential	2.78¢	2.68c	2.54¢	2.18¢	1.77¢
Commercial and small industrial	2.60¢	2.26¢	2.04¢	1.84¢	1.69¢
Large industrial	2.03¢	<u>1.62</u> ¢	<u>1.37¢</u>	1.15¢	.91¢
Energy Generated and Purchased					
(Thousands of kWh):	0.000	1.000.000	4 500 014	1 1 / 1 000	155 000
Generated (net station output) steam. Generated (net station output) hydro.	3,739,082	1,266,638 2,313,162	4,583,914	1,141,020	157,303
Generated (net station output) hydro.	2,285,446	2,313,102	2,113,537	2,536,790	2,692,738
combustion turbines	784,021	40,115	91,686	6,366	12,537
Generated (net station output)	104,021	40,110	51,000	0,000	12,001
internal combustion	7,754,021	10,819,127	(200)	(414)	227
Purchased and net interchange	(248)	(156)	5,935,645	9,214,556	9,613,287
Total energy generated and		,			
purchased	14,562,322	14,438,886	12,724,582	12,898,318	12,476,092
Losses and Company use	910,017	1,133,744	790,659	888,851	992,447
Energy Sold	13,652,305	13,305,142	11,933,923	12,009,467	11,483,645
Cost per kWh of Total Energy					
Generated and Purchased**	1.04¢	.73¢	.59¢	.37¢	.42¢
Net System Hourly Peak in kW	2,954,000	2,776,000	2,519,000	2,310,000	2,225,000
LIGT System Houry L Car III NYY	2,004,000		£,010,000	4,010,000	<u> </u>

* Due to the rate structures in effect between December 23, 1974 and September 30, 1975, approximately 130 customers historically classified as "large industrial" were billed for all or a portion of such period on a rate schedule in the "commercial and small industrial" classification.

 $\ast\ast$ Does not include fixed cost associated with Company generation.

BUSINESS

General

Electric energy sales for the 12 months ended December 31, 1979 amounted to 13,652,305 megawatt-hours including 513,158 megawatt-hours of sales for resale. In such period 45 percent of the Company's total operating revenues were derived from residential service, 28 percent from commercial and small industrial users, 21 percent from large industrial users and 6 percent from others. The average use per residential customer served by the Company during this period was 13,814 kilowatt-hours, approximately 1.6 times the 1979 investor-owned utilities national average, and the average revenue per kilowatt-hour sold to all residential customers was 2.78 cents compared with the 1979 national average of 4.33 cents.

The basic economic activities in the Company's service area are lumbering, wood products, pulp and paper manufacturing, diversified agriculture, food processing, primary and fabricated metal producing, and the manufacture of clothing, machinery and electronic equipment. Portland is the major distribution and retailing center for Oregon, southern Washington and most of Idaho and a major West Coast shipping port.

Kilowatt-hour sales to ultimate customers have increased in each of the years 1975 through 1979 as a result of population growth. This growth has been partially offset by energy conservation measures, including the Company's own activities. The increase in 1976 over 1975 was also due in part to a 3-month strike commencing in 1975 at the plants of the Company's largest industrial customer, which resulted in curtailment of usage not only by such plants but by suppliers of such customers.

The Company has approximately 2,800 regular employees of whom about 40 percent are represented by labor unions under working agreements which extend to March 1, 1981. The Company has group life insurance, retirement, stock purchase, sick benefit and medical plans for its employees. The employees and the Company share in the cost of these plans except the retirement and sick benefit plans, the cost of which is borne by the Company. See Note 1 of Notes to Financial Statements for further discussion of the Retirement Plan. The Company considers its employee relations satisfactory.

Power Supply

General

The Company's maximum hourly demand to date of 3,041 megawatts occurred in January 1980. To meet this demand the Company operated its own generating facilities and made use of the capacity available under existing exchange contracts with other utilities. The following tabulation shows the sources of energy for the 12 months ended December 31, 1979 and 1978.

12 Months Ended December 31, 1979			
Megawatt- hours	%_	Megawatt- hours	%
2,285,446	15.7	2,313,162	16.0
4,522,855	31.1	1,306,597	9.0
3,453,872	23.7	4,191,765	29.0
1,394,362	9.6	3,271,613	22.7
885,251	6.0	922,431	6.4
2,020,536	13.9	2,433,318	16.9
14,562,322	100.0	14,438,886	100.0
	December 3 Megawatt- hours 2,285,446 4,522,855 3,453,872 1,394,362 885,251 2,020,536	December 31, 1979 Megawatt- hours % 2,285,446 15.7 4,522,855 31.1 3,453,872 23.7 1,394,362 9.6 885,251 6.0 2,020,536 13.9	December 31, 1979 December 31 Megawatt- hours % Megawatt- hours 2,285,446 15.7 2,313,162 4,522,855 31.1 1,306,597 3,453,872 23.7 4,191,765 1,394,362 9.6 3,271,613 885,251 6.0 922,431 2,020,536 13.9 2,433,318

Trojan Plant

The Trojan Plant, located on a site 42 miles northwest of Portland, near the City of Rainier on the Oregon side of the Columbia River, is owned jointly by the Company ($67\frac{1}{2}$ percent), Eugene Water & Electric Board (30 percent) and Pacific Power & Light Co. ($2\frac{1}{2}$ percent). The NRC has granted a 40year license to operate the Trojan Plant at full power and all other presently required permits and certificates have been granted by other federal and state agencies. A licensee under an operating license from the NRC for a nuclear generating plant is required to maintain public liability insurance under the Price-Anderson Indemnification Act, as amended, covering both personal injury and property damage. As a part of the required insurance all owners of operating nuclear reactors may be assessed a retroactive premium of \$5,000,000 per reactor for each nuclear accident occurring at any reactor in the United States. Since there is a limit of two assessments per year, the Company's maximum exposure for the Trojan Plant would be \$6,750,000 per year.

Company Hydro

The Company owns eight hydroelectric generating plants with net peaking capability of 661 megawatts. All of the Company's hydroelectric plants are licensed under the Federal Power Act. Upon the expiration of a major license, a new license may be granted to the Company or, upon payment to the Company of its "net investment" therein, not to exceed "fair value" plus severance damages, the projects may be taken over by the United States or licensed to a new licensee. The licenses provide that after an initial 20-year period earnings in excess of a specified return ("excess earnings") are to be set aside in an amortization reserve, which may reduce the "net investment" in the projects.

The original license on the Bull Run Hydroelectric Plant expired in 1974, and on May 23, 1980 the Company was issued a new license for the plant. The new license will expire in 2004. On April 9, 1980 a new license for the Oak Grove Hydroelectric Project was issued. The new license will expire 2006. The licenses for all other Company hydro projects expire from 2001 to 2006.

The Company holds state licenses covering all or portions of certain hydroelectric projects which are also covered by licenses under the Federal Power Act. Such licenses expire between 2002 and 2011. Each of the state licenses, except one, contains provisions similar to the Federal Power Act licenses with respect to amortization reserves and authorizes the State of Oregon to take over the project when it is fully amortized. Under state law, the state or any municipality may acquire a project subject to state license, upon not less than two years notice, at the fair value thereof but not exceeding the term "net investment", or otherwise may acquire a project by condemnation proceedings. No proceedings are currently underway to acquire any of the Company's hydroelectric projects under either state or federal law.

In December 1978 the Confederated Tribes of the Warm Springs Indians filed with the Federal Energy Regulatory Commission an application for an increase in the payments made by the Company for the overflow onto tribal lands of the reservoir at the Company's Pelton Hydro Projects. Review of such payments is required under the Federal Power Act with respect to licenses granted for hydro projects under its jurisdiction. The Company currently pays the Warm Springs Indians under a formula which results in a payment of approximately \$100,000 annually. While the Company proposes to increase the annual payment to approximately \$500,000, the Warm Springs Indians have filed testimony which indicates a payment of \$3,000,000 annually is appropriate. The PUC has filed testimony on behalf of the ratepayers which indicate \$540,000 annually is appropriate. Hearings on the matter, which began in February 1980, are concluded and the Company expects a decision to be rendered later in the year. Should the resolution of this matter result in an increase in the payments made to the Warm Springs Indians, the Company will seek recovery through the ratemaking process.

Combustion Turbines

The Company has six jet-engine type combustion turbine generator units, having a cold weather capability of 385 megawatts, and industrial type combustion turbine generator units with a peak capability of 600 megawatts. All of the turbines and generators are leased, with the balance of each installation being owned by the Company. Four of the jet-engine type units are located in the Harborton area in Portland and two at the Company's Bethel Substation near Salem. The industrial type units, which have been converted to combined cycle operation, are located at Beaver on the Columbia River approximately 60 miles northwest of Portland. All the units operate on petroleum distillates, although the jet-engine type can also operate on natural gas, if available.

The Company's turbines are used primarily to meet peaking or emergency requirements. The operation of combustion turbines is subject to environmental regulation, which in the case of the Harborton station has prevented operation except in limited circumstances and will result in their relocation or disposition (see "Business—Environmental Matters").

Public Utility Districts Hydro

The Company has long-term contracts with Washington Public Utility Districts ("Districts") owning hydroelectric projects on the Columbia River. The Company receives portions of the output of these projects in return for payment of the same proportion of the annual cost (including debt service). The Company's obligation to pay under these contracts continues whether or not the project is operable. In the event that a District's facilities were to become inoperable, the Company's recovery of insurance proceeds would not reimburse it fully for its charges under the contracts with the Districts. The Company has agreements with Bonneville Power Administration ("Bonneville" or "BPA") for the transmission of power to the Company's system for the duration of the power purchase contracts with the Districts. See Note 7(b) of Notes to Financial Statements.

Bonneville Power Administration

Bonneville acts as the marketing agent for sale of power generated at federal power projects and also provides about 80 percent of the Pacific Northwest's transmission capacity. Until September 1, 1973, Bonneville was obligated to supply all of the Company's firm power requirements in excess of its other power resources and had, for some years, accounted for approximately 40 percent of the Company's total energy requirements. Under agreements with Bonneville and other utilities, the Company presently receives approximately 20 megawatts of firm power until July 1, 1980, at which time this amount of power will increase to 80 megawatts peak (68 megawatts average) until June 30, 1990. Bonneville is also a party to agreements under which the Company receives 10 percent of the output of the 800-megawatt Hanford Nuclear Generating Plant. The Company has been able to and may in the future be able to purchase or borrow surplus hydroelectric power from Bonneville to the extent such power is available, but it is unlikely, under existing law, that the Company will be able to enter into long-term power purchase contracts with Bonneville. In addition, the Company has an agreement with Bonneville, expiring in 1993, under which the Company can receive peaking capacity in amounts increasing to 550 megawatts.

As a result of a suit involving a contract with one of its potential industrial customers, Bonneville has produced and is currently circulating for comment an environmental impact statement which examines its role in the region's electric power supply system. Should Bonneville's role be altered pursuant to that examination, certain suits brought by the City of Portland (see "Proposals for Reallocation of Federal Power"), or otherwise, the result could be increased costs of capacity, transmission and energy for the Company.

Other Resources

As a result of construction of storage dams in Canada pursuant to a treaty between that country and the United States, the Company is receiving as part of its share of the output of District projects substantial firm power benefits from storage releases. In addition, the Company under a series of purchase and exchange agreements is entitled to additional amounts of "Canadian Entitlement" power equaling approximately 235 megawatts of peak power and 95 megawatts of average power in 1979-80. Thereafter the amounts decrease gradually to 29 megawatts of peak power and 16 megawatts of average power in 2002-2003.

Coordination and Pooling

The Company is a member of the Northwest Power Pool and operates under a long-term Coordination Agreement with 15 other parties in the Pacific Northwest and is a member of the Western Systems Coordinating Council representing some 59 electric systems in 14 western states and British Columbia. The general purpose of these associations is to promote the reliable operation of the interconnected bulk power systems by the coordination of planning and operation. The Company is also one of seven investor-owned utilities which are parties to an Intercompany Pool Agreement providing for the sharing of surplus energy available to the members, reserves, and planning activities including those relating to planning for needed additional generating facilities.

The Company, together with Bonneville, several public agencies and investor-owned electric utilities, participates in an extra high voltage transmission intertie between the Pacific Northwest and Pacific Southwest. Among other benefits to the Company from the intertie are payment for its use by other utilities, diversity and economy exchanges with southwest utilities, and system support during emergencies.

Proposals for Reallocation of Federal Power

Legislation designed to reduce the disparity between the electric rates of investor-owned utilities and publicly owned utilities, to provide for the region's future power supply, to assure power supplies for the large industrial customers which are now served directly by Bonneville (under contracts which expire beginning in 1983) and other publicly owned utilities, and to encourage energy conservation was introduced early in the first session of the 96th Congress. Although similar legislation considered by the 95th Congress did not receive the necessary committee approvals, the present legislation has passed the Senate and is currently being considered by the House of Representatives. In June of 1980 the appropriate subcommittee of the House of Representatives began its final markup of the legislation; however, in the view of the forthcoming adjournment, this legislation is not likely to be passed by the 96th Congress.

The proposed legislation would provide that Bonneville would make available to the Company and to the other investor-owned utilities in the Pacific Northwest an amount of energy at Bonneville rates equal to the residential and small farm loads of each such utility. In return, each utility would make available to Bonneville an equal amount of energy at the utility's average system cost. Since Bonneville rates are substantially lower than the Company's average system cost, such legislation would reduce the Company's power costs.

The proposed legislation would also authorize Bonneville to acquire the entire output of thermal generating plants in the Pacific Northwest which are under construction or in an advanced stage of the licensing process on the effective date of the legislation, as well as projects commenced after that time. The effect on the Company of adoption of this part of the proposed legislation would be to give assurance to the Company that the cost of construction and operation of its new thermal plants would be recovered, since Bonneville would agree to purchase the entire output of the plants at cost (which presumably would include the cost of debt service and a return on equity) and resell such output to electric consumers throughout the region. It is believed that this "regional guarantee" would materially improve the credit rating and marketability of securities issued to provide funds for construction of such plants.

The proposed legislation also contains a provision which would have the effect of exempting from the provisions of the Public Utility Holding Company Act of 1935 companies organized to construct or finance generating facilities the output of which is to be acquired by Bonneville. This would permit the Company and other utilities in the region to form a jointly owned company to construct, own and operate new generating facilities free from the provisions of the Public Utility Holding Company Act of 1935.

As another approach to reducing the disparity in electrical rates paid by customers of publicly owned and investor-owned utilities, the State of Oregon enacted a law in 1977 designated to obtain low-cost federal hydroelectric power, presently being sold to industrial customers by Bonneville, for Oregon residential and rural customers. The act creates an Oregon Domestic and Rural Power Authority (the "Power Authority") intended to qualify as a preference customer eligible to purchase power from Bonneville for resale to Oregon residential and rural customers, including the Company's, presently served by investor-owned utilities. The Oregon Public Utility Commissioner (the "PUC") is given the power to order investor-owned utilities to supply power to the Power Authority at fair and reasonable rates. Although the Power Authority would "own" the power until it was delivered to consumers, the delivery of the power, as well as the ownership and maintenance of the lines, would continue to be by the investor-owned utilities acting under contract with the Power Authority. Investor-owned utilities would also continue to furnish energy from their own resources to customers not

he Power Authority.

of functions and powers granted to the Power Authority may commence on or after 1, but only if both the following have occurred:

The 96th Congress has failed to enact a regional power bill which the Governor deterl provide equitable costs of power to all Oregon consumers; and other utilities, diversity and economy exchanges with southwest utilities, and system support during emergencies.

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Exercise of functions and powers granted to the Power Authority may commence on or after March 1, 1981, but only if both the following have occurred:

(1) The 96th Congress has failed to enact a regional power bill which the Governor determines will provide equitable costs of power to all Oregon consumers; and (2) The PUC has determined, on the basis of a hearing on the record, that such exercise will result in substantial benefits to the citizens of Oregon.

The PUC held a preliminary hearing in February 1980 to determine the parties entitled to participate in the hearings, which are scheduled to be held in late summer. The Company is unable to predict the outcome of the hearings, the outcome of Congressional action on the regional power bill, whether the Power Authority, if organized, would qualify as a preference customer or whether it would be able to obtain significant amounts of Bonneville power. Therefore, the Company is unable to predict how it will be affected by the Power Authority. The act expires effective July 1, 1985, and the PUC can phase out the operation of the Power Authority upon a finding that it no longer results in substantial benefits to the citizens of Oregon.

In addition, the City of Portland filed suits against Bonneville in U.S. District Court which, if successful, might enable Portland to obtain lower cost federal power. One suit alleges that Bonneville's denial of Portland's application for power violated the Bonneville Act, the Due Process Clause of the Fifth Amendment, and the Administrative Procedure Act. The Court has indicated that the complaint of the City of Portland in this lawsuit will be dismissed, but an appeal may be taken by the City. The dismissal would not affect a cross complaint filed by the Company against Bonneville in which the Company alleges that its rural and domestic customers are entitled to a preference to federal hydro power over the industrial and commercial customers of public power agencies who are now being supplied with such power. The Bonneville Act gives preferences to domestic and rural customers and also the customers of public power agencies, although the relative preference between them has not vet been determined. The other suit contends that Bonneville's execution of power sale contracts and net billing agreements constitute major Federal actions, within the meaning of the National Environmental Policy Act, which have sufficient impact to require an environmental impact statement prior to each such action. The requested relief includes the invalidation of all power sale contracts and net billing agreements executed by Bonneville since January 1, 1970, the adoption of procedures by Bonneville for the allocation of the Federal power it markets and the required preparation by Bonneville of an environmental impact statement prior to entering into any significant contracts.

In addition, the Portland City Council has passed a resolution providing that in the event the suits do not accomplish their objective of challenging the eligibility and priority of preference customers to Bonneville resources under the Bonneville Act, but do succeed in setting as de Bonneville's existing power sale contracts, the City of Portland could create a municipal utility system to serve the residents of the City of Portland. The Company is unaware of any definitive plans to implement the resolution. The Company is unable to predict whether the City of Portland will be successful in its efforts to obtain the lower cost Federal power, and thus the effects that those efforts will have on the Company.

Proposals for People's Utility Districts

Petitions in support of placing on the ballot a measure for the formation of People's Utility Districts ("PUD's") to supply electricity have been filed in six counties that make up approximately 90 percent of the Company's service territory. As a result of the filing of these petitions, along with subsequent hearings held by certain state and county agencies, the matter will be placed on the ballot in each county at the general election in November 1980. If the voters in a county approve the ballot measure, a PUD will be formed for that county and a study of the feasibility of building or acquiring facilities to serve electrical customers will be performed. After the study is completed the PUD will be required to hold another election before it can enter into financial obligations required to purchase or build the facilities needed to serve its customers. The Company cannot predict whether voter approval will ultimately be obtained in any county, or what the effect on the Company's operations would be if any such PUD's were formed.

In another, largely rural, county in which about 4 to 6 percent of the Company's customers are located, a PUD, which has been in existence but inactive for many years, recently completed a feasibility study which culminated in a final report issued on April 8, 1980. The PUD is currently evaluating this report and has indicated that it may seek voter approval in November 1980 for the issuance of revenue bonds, the proceeds of which would be used to acquire the Company's electrical distribution facilities in that county. The Company cannot predict whether voter approval will be sought and, if sought, whether this approval will be obtained or what further actions the PUD may take in that regard.

Antinuclear Petitions

Two initiative petitions which would affect future nuclear plants in Oregon have been submitted to the Secretary of State of Oregon for verification of signatures. If there are sufficient valid signatures, the petitions will be submitted to the voters at the November 1980 general election. One petition would condition the siting and financing of any new nuclear plant on the existence of a federally licensed permanent disposal facility for spent nuclear fuel and high-level radioactive waste and would require statewide voter approval before the issuance of a site certificate. The second petition would prohibit construction and licensing of nuclear plants in Oregon and would also prohibit Oregon public utilities from participating in the financing of nuclear plants regardless of their location.

Future Resources

The Company is planning thermal power plant additions and has agreed to take major participations in thermal power plants being sponsored by others, as set forth in the following.

Units Under Construction or Planned	Location	Not Capability Megawatis	Percent of Company's Interest	Fuel	Company Cost to 12/31/79 (000s)	Earliest Date of Operation (A)
Boardman	Boardman, Oregon	530	80 (B)	Coal	\$336,056	1980
Colstrip 3 and 4	Colstrip, Montana	700/each	20 (B)	Coal	30,164	1984
WPPSS 3	Montesano, Washington	1240	10	Nuclear	49,346	1986
Pebble Springs 1 and 2	Arlington, Oregon	1260/each	47.1 (B)	Nuclear	113,380	early 1990s
Skagit 1 and 2	Sedro Woolley, Washington	1288/each	30 (B)	Nuclear	89,724	early 1990s

(A) Dates of operation are based on earliest feasible availability and are subject to continuing review and revision as a result of rescheduling due to delays in obtaining requisite governmental authorization, changes in customer usage forecasts, financing considerations (including possible inability to issue additional securities), and changes in regulatory requirements. Because of these and other factors, actual dates of operation may be later than present estimates.

(B) Arrangements for joint ownership of these projects are subject to continuing review by the Company and to continuing negotiations among other Northwest utilities. The Company's ownership in any project may be changed as a result of such review and negotiations or as a result of other developments, and accordingly the Company's share of costs of these projects may change.

Boardman Plant

Agreements have been executed under which the Company will own 80 percent of the Boardman plant with the balance divided equally between two other utilities in the Pacific Northwest; the estimated cost of the Company's interest in the unit is \$410,000,000 to \$440,000,000. The Company has received from the State of Oregon the necessary site certificate and approval of the ownership arrangements, and construction is proceeding on schedule. The Company is leasing the coal-handling facilities located at the Boardman plant (see Note 7c of Notes to Financial Statements).

Colstrip Projects

The Company has entered into an agreement under which it will own 20 percent of each of Colstrip Units 3 and 4, two 700-megawatt, mine-mouth, coal-fired generating units sponsored by Montana Power Company. The units will be located at Colstrip in southeastern Montana and are presently scheduled for commercial operation in 1984 and 1985, respectively. After a portion of the project is sold (at no less than the Company's cost) to a group of cooperative utilities, as required by the state site certificate, the Company's ownership share is expected to be 18.6 percent.

There have been protracted hearings and appeals in connection with Montana Power Company's effort to obtain necessary permits under both state and federal power plant siting laws. However, on

September 17, 1979, the Supreme Court of the State of Montana determined that a site permit issued by the State of Montana satisfied applicable state laws, and on September 11, 1979, the U.S. Environmental Protection Agency issued the required air quality permit. Shortly thereafter, field construction on Colstrip Units 3 and 4 commenced. Certain provisions in both permits still require further definition or clarification, but this is not expected to result in significant design changes. The Northern Cheyenne Indian Tribe and Northern Plains Resources Council, two groups opposing Colstrip Units 3 and 4, have petitioned the United States Court of Appeals for the Ninth Circuit for review of the permit issued by the EPA. These same groups have requested Montana State court review of the state air quality permit. As the result of settlement negotiations, the Northern Cheyenne Indian Tribe has withdrawn from these legal proceedings. Settlement negotiations are continuing with Northern Plains Resources Council. The participants intend to continue construction, and Montana Power has advised the other participants that it believes the likelihood of a halt in the construction is remote and that other pending legal issues can be resolved while construction proceeds. It is possible, however, that these proceedings could delay or preclude completion of the project or increase its costs.

WPPSS No. 3

The Company has entered into an agreement to own 10 percent of a 1240-megawatt nuclear generating plant being sponsored by Washington Public Power Supply System ("WPPSS"). WPPSS is a municipal corporation and operating agency of the State of Washington, consisting of a number of public utility districts and municipalities, which owns and operates generating and transmission facilities and markets the power therefrom. The plant being sponsored, known as WPPSS No. 3, is planned for operation in 1986 at a site known as Satsop near the community of Montesano, Washington.

The Company has been advised by WPPSS that a Washington State site certificate and NRC construction permit have been duly issued for the plant, and construction is proceeding.

Pebble Springs and Skagit Projects

The Company is sponsor of and has a 47.1 percent interest in the Pebble Springs project ("Pebble Springs") to consist of two 1260-megawatt nuclear generating units to be located in Oregon, and has a 30 percent interest in the Skagit project ("Skagit") to consist of two 1288-megawatt nuclear generating units being sponsored by Puget Sound Power & Light Company ("Puget") to be located in the State of Washington. Applications have been filed with the appropriate state and federal agencies for the necessary site and construction permits, licenses and certificates for both projects. There has been intervention by environmental and antinuclear groups in both the state and federal proceedings on such application. No federal work authorization, construction permits or licenses have yet been issued for either of the projects.

As a result of the accident at Three Mile Island in Pennsylvania, the NRC announced that it would suspend the issuance of construction permits and the licensing of nuclear power plants. The NRC stated that the suspension would continue until, among other things, (i) it completes review of its staff proposals concerning operation of existing nuclear power plants, recommendations of the President's special commission to investigate the Three Mile Island accident, and a special study of the NRC and its procedures, and (ii) the NRC promulgates new rules for emergency planning for nuclear accidents. In December 1979, President Carter requested that the NRC not continue the suspension for more than 6 months thereafter. The NRC has recently issued limited operating licenses for two nuclear plants. It is not possible to determine the full effect of the NRC action or of any changes in the NRC or its policies which may result from the review or from congressional or executive action, upon the construction and licensing of the Pebble Springs or Skagit units, or the effect upon the Company's financial position or results of its operations.

The Company had anticipated completion of the Pebble Springs site certification proceeding before the State of Oregon Energy Facility Siting Council ("EFSC") by the third quarter of 1979 and issuance of a construction permit by the NRC in the latter half of 1979. However, following the Three Mile Island accident, the Oregon Legislature adopted a bill which establishes a moratorium on site certification of new nuclear generating plants in the State of Oregon until November 15, 1980. The bill also requires the completion of studies by the Oregon Department of Energy of (a) the cost and availability of long-term storage for radioactive waste from nuclear power plants and (b) the safety issues raised by the accident at Three Mile Island. The Oregon Department of Energy has released its study of the cost and availability of long-term storage of radioactive waste. The report concluded that long-term storage is feasible and will be available in the late 1990's and in the interim spent fuel can be safely stored in water cooled basins. The report also concluded that the costs of spent fluid disposal are a small portion of the cost of producing electricity by nuclear power. The report on the Three Mile Island accident safety issues is expected this summer.

On September 12, 1979 an administrative law judge in the EFSC proceeding issued a proposed order that cites several instances in which the evidence submitted in the Pebble Springs proceedings failed to satisfy the rules and standards established by EFSC. The Company has taken exception to such order. The order has been referred to EFSC which may accept, reject or modify its content. The Company cannot predict the content of the final order by EFSC or the outcome of any subsequent appeal of the order. In addition, on March 14, 1980 the EFSC issued an order suspending all further proceedings on the Pebble Springs licensing application until July 1, 1981. After that date, the suspension will extend automatically for an indefinite number of consecutive 6-month periods until the Company gives the EFSC notice that it wishes to proceed. As a result of the delays and problems in licensing proceedings, the Company is considering alternative sites in the State of Washington and alternative sources of generation to Pebble Springs. Consequently, the Company will reduce expenditures for licensing approval to a minimum, but will attempt to ensure that the licensing proceeding is not permanently terminated.

Skagit has been granted a site certificate by the State of Washington. Upon appeal by a local antinuclear group, such certificate has been upheld by a Washington State county court, but an appeal of that decision has been filed in the Supreme Court of the State of Washington. Puget has applied to the NRC for a limited work authorization permit ("LWA"), which allows preliminary site preparation, and for construction permits for the Skagit project. However, as a result of the Three Mile Island accident and the activities of intervenors, the Company is unable to predict the timing of any decision on the LWA or of completion of hearings on the construction permit, but anticipates substantial delays in both. Additionally, the United States Geological Survey, acting as a consultant to the NRC, has raised new issues relating to the geological and seismological characteristics of the region and the Skagit site. This has caused the NRC staff to withdraw its favorable evaluation of the site. Inability to resolve these issues could result in denial of a construction permit for the Skagit site.

On November 6, 1979, in a nonbinding advisory ballot, the voters in Skagit County, Washington in which the proposed Skagit project is to be located, voted by a substantial majority in opposition to the location of the project in Skagit County. As a result of this ballot the Skagit County Commission voted against the continuation, beyond the end of 1979, of the existing zoning for the Skagit site which permits construction of the project. Puget has filed for a judicial review of the need for such local zoning approval. There is no assurance that such review will be successful. Puget has announced publicly that as a result of regulatory uncertainties, it will defer construction of the Skagit project for 2 to 3 years. In addition, Puget is considering eliminating one of the units of the Skagit project and is studying alternative sites in Washington State. As a result of the foregoing, the estimated commercial operation dates for Pebble Springs and Skagit have been delayed until the early 1990s.

On July 16, 1980, it was announced that the Skagit project will be relocated from the site in Skagit County, Washington to a site at the U.S. Department of Energy's Hanford Reservation near Richland, Washington. The Company now believes that the project can be brought on line sooner, with fewer licensing risks and other uncertainties, at the Hanford site than at the Skagit site. The Company will amend its Nuclear Regulatory Commission application to substitute the Hanford site for the Skagit site. Applications will be filed for new Washington State site certification and other necessary permits.

In addition to these regulatory uncertainties General Electric Company ("G.E."), the supplier of the nuclear steam supply systems for Skagit, has taken the position that delays in the Skagit project may excuse it from further performance under the contract. G.E. has expressed interest in renegotiating the contract price and other terms. The Company's position is that the provisions of the existing contract govern adjustment of scheduling and costs due to project delay.

If any of the Pebble Springs or Skagit units were moved to another site there may be investments by the Company attributable to the abandoned site which could not be considered to be a part of the cost of the unit being constructed at the new site. Additionally, if any of such units were ultimately cancelled, there would be cancellation charges borne by the Company. In either such case, the Company would seek regulatory authorization to amortize the amount of any such cancellation charges or investments over an appropriate period and to recover such amounts through its rates. If any of such cancellation charges or investments could not be recovered through the ratemaking process, the Company would have to write them off. (However, in that connection, see Note 6 of Notes to Financial Statements).

Fuel Supply

Nuclear

The nuclear fuel cycle for the Company's operating and proposed nuclear generating facilities is comprised of the following elements: (1) mining and milling of uranium ore to produce uranium concentrates, (2) conversion of uranium concentrates to uranium hexafluoride, (3) enrichment of the uranium hexafluoride, (4) fabrication of fuel assemblies, (5) use in the reactor followed by on-site storage of spent fuel, and (6) shipment and long-term storage of spent fuel, or, if and when facilities therefor should become available in the United States, chemical separation (reprocessing) into reusable and waste material and long-term storage of the waste material.

Existing contracts, together with uranium hexafluoride presently owned, are expected to cover the nuclear fuel needs of the Trojan and Pebble Springs units for operation into the spring of the years shown below:

	Pebble Springs		
	Trojan	Unit 1	Unit 2
Uranium	1989	1993	
	(see text below)		
Conversion	1989	1993	
Enrichment	2002	2009	2011
Fabrication	1987	1995	
		(1998 option)	
Reprocessing	(see text below)		

For the Trojan plant, the contracts for uranium and conversion are with Kerr-McGee Corporation, for enrichment with the United States Department of Energy ("USDOE") on a 30-year requirements basis and for fabrication with Westinghouse Electric Corporation. For Pebble Springs Unit 1, uranium for the initial core has already been purchased and is being inventoried until required in the form of either UF_6 or U_3O_5 which will be converted to UF_6 under a conversion contract with Kerr-McGee Corporation. The contracts for both Pebble Springs units for enrichment are with USDOE on a 30-year fixed-commitment basis. The Unit 1 enrichment contract has been converted to USDOE's new adjustable fixed-commitment form. The Unit 2 enrichment contract remains in a long-term fixedcommitment form. The Pebble Springs units' fabrication contracts are with Babcock & Wilcox Company. All of the Company's nuclear fuel contracts contain price escalation provisions.

Fuel costs to the Company for the Trojan Plant for the current fuel cycle are estimated to be 4.3 mills per kWh. The estimate includes the cost of permanent storage of spent fuel. The Company anticipates that the cost of future cycles will increase substantially.

The Company has contracted with Allied-General Nuclear Services ("AGNS") for the shipping, storing and reprocessing of fuel discharged from the Trojan plant during the first four years of operation. The validity of this contract is currently in dispute since AGNS has indicated a desire to terminate the contract while the Company has denied any legal right of AGNS for such action. However, no reprocessing facilities are presently in operation in the United States and recent events have created considerable doubt as to whether reprocessing of nuclear fuel will take place in the foreseeable future.

The Company has facilities for the storage of spent fuel at the Trojan plant which will accommodate fuel from the plant through 1989 (although fuel core discharge capability will be lost in 1986). Should there not be a suitable alternative method of storing or disposing of nuclear fuel such as offsite storage or reprocessing, the Company may be forced to discontinue operation of the Trojan plant during 1989 when on-site storage capability is exhausted. Included in the uranium commitments listed above for the Trojan plant is uranium hexafluoride supplied by Canadian firms. Through 1984, the Company will be subject to restrictions with respect to the amount of such foreign uranium that will be enriched by USDOE in any one year. The Company does not believe that these restrictions will impair its ability to provide sufficient nuclear fuel for the operation of the Trojan plant.

The Company is currently investigating possible sources of additional fuel supply for its nuclear units. While the Company believes that additional uranium concentrates, along with the other elements of the nuclear fuel cycle, will be available, there can be no assurance that the Company will be able to acquire such additional supplies and, in any event, it could be faced with substantially higher fuel prices than are now being paid.

The Company has been advised that Puget has contracts for uranium concentrates, conversion and fabrication sufficient for the initial nuclear cores and one reload for each unit of the Skagit project and that Puget has a contract with USDOE to provide enrichment services for up to 30 years. The Company has also been advised that WPPSS has entered into a 30-year contract with USDOE for enrichment services and has contracts for uranium concentrates and fabrication for at least the initial nuclear core for WPPSS Nuclear Project No. 3. However, representatives of the General Electric Company have taken the position that delays in the Skagit project may excuse it from performing the uranium contract, and they proposed to renegotiate the terms of the uranium contract in a manner that could significantly increase the contract price of uranium. The Company's position is that such increases are not justified under the contract.

Fossil

The Company's combustion turbines operate on petroleum distillates. The Company's available storage capacity for petroleum distillates is approximately 1,650,000 barrels of fuel in storage. The Company believes that it will be able to purchase distillate fuel in the future, through existing contracts and on the open market, adequate to operate its combustion turbines to the extent such operation may be required. However, future availability of distillate fuels may be subject to shortages and allocations associated with the national and world energy situation. Since the Company's requirements for distillates are highly variable, depending largely upon hydro conditions and Trojan operation, it has not been able to establish supply arrangements on a long-term basis. In addition, strict fuel specifications imposed by environmental regulations limit the sources of acceptable distillates.

The Company has executed a coal supply contract with AMAX Inc. to provide the Boardman plant with its anticipated requirements for approximately 20 years. Low-sulfur coal is delivered from the AMAX Belle Ayr mine near Gillette, Wyoming. The coal supply contains an average of less than 0.5 percent of sulfur by weight and when burned will emit less than the Environmental Protection Agency ("EPA") allowable limit of 1.2 pounds of sulfur dioxide per million Btu. The coal is obtained from surface mining operations which are subject to federal, state and local regulations as to restoration of the surface subsequent to removal of the coal. Coal costs for this plant could escalate by an indeterminate amount as a result of contractual provisions for price escalation and legislation or litigation applicable to the mines of the Company's coal suppliers. Railroad transportation to the Boardman plant represents the single largest component of the total cost of the coal.

Coal for the Colstrip units will be provided for the life of the units under a firm commitment contract with Western Energy Company ("Western"), a wholly owned subsidiary of The Montana Power Company. Western controls coal reserves in the Colstrip area having an average sulfur content of less than 1.5 percent by weight. The plant design includes sulfur dioxide removal equipment to allow operation in compliance with EPA new source performance emission standards. The contract is expected to provide the coal requirements for the two units.

Litigation

On October 2, 1975, the Company was served in a suit (Charles M. Frady, et al. v. Portland General Electric Company) brought in the Circuit Court of the State of Oregon for the County of Marion by 17 residents who live in the vicinity of the Company's Bethel combustion turbines. The suit claimed that the Bethel combustion turbines violate state and county noise standards and are a nuisance and asked to have their operations enjoined. In addition, nine separate damage actions were brought in the same court by a number of residents, including some of those who are plaintiffs in the injunctive action, alleging damage to their persons and properties to the extent of \$3,675,000. On April 4, 1978, the plaintiffs withdrew their suits, but without prejudice if they refiled their suits within one year of that date. They refiled their suits on April 2, 1979, again claiming that the Bethel combustion turbines violate state and county noise standards and are a nuisance. They seek damages of \$2,600,000. On May 30, 1980 this action was again dismissed.

On June 14, 1978, two Oregon State Senators filed an action (Wyers & Hallock v. Dressler, et al.) in the Circuit Court for Multnomah County, Oregon, to require EFSC to conduct a hearing with respect to storage of spent fuel at Trojan, alleging that spent fuel storage at Trojan constitutes permanent radioactive waste storage contrary to the statutes of Oregon and contrary to the premises upon which the site certificate was issued for Trojan and that the Trojan site certificate should be revoked. Based upon an opinion of the Attorney General of the State of Oregon that such a hearing was not required under the laws of Oregon and that storage of spent fuel at Trojan did not constitute permanent storage, EFSC had refused to hold that hearing. The Circuit Court issued a judgment ordering EFSC to hold such a hearing. EFSC appealed to the Court of Appeals which upheld the order of the Circuit Court requiring a hearing, but ruled that the hearing did not need to be contested. Wyers and Hallock asked the Oregon Supreme Court to review the Court of Appeals decision. The Supreme Court denied the review. EFSC has asked the plaintiffs whether they desire to proceed with a legislative type hearing. The plaintiffs have not yet responded. The Company cannot predict whether the hearing will be held or the outcome of the hearing if it is held. However, the Company does not expect the Trojan site certificate to be revoked.

On February 7, 1979, the Company and another joint owner of the Trojan Plant, Pacific Power & Light Company, filed suit in United States District Court for the District of Oregon seeking to recover from Bechtel Corporation and Bechtel Power Corporation all costs incurred as a result of errors in the design of the Trojan Plant's Control Building. The costs included excess replacement power costs of \$26 million incurred during the 1978 shutdown of the Plant and an estimated \$6.5 million for other expenses, including any necessary modifications of the Plant. The Company is currently considering amending its complaint to recover additional related costs.

On March 16, 1979 Bechtel Corporation and Bechtel Power Corporation filed their answer to the complaint alleging numerous affirmative defenses. The answer also contains counterclaims of more than \$108 million. One counterclaim alleges that if Bechtel is held liable for excess replacement power costs, it would be entitled to a sum it estimates will substantially exceed \$100 million as additional compensation to reflect acceptance of that risk. A second counterclaim alleges Bechtel is entitled to an additional fee of approximately \$6 million as an equitable adjustment for additional services performed, but allegedly not contemplated when the contract between the parties was executed. The third counterclaim for approximately \$2.7 million, the final amount of which is as yet undetermined, demands payment for expenses relating to modification of the Control Building and proceedings before the NRC. The Company feels that the counterclaims have little merit.

On June 4, 1980, the District Court Judge rendered an opinion that the Company's contract with Bechtel for engineering and construction services at Trojan prohibits recovery of the \$26 million consequential damages claim. The Company believes the trial judge was incorrect and intends to appeal the consequential damages issue. If Bechtel were to ultimately win the consequential damages issue, \$100 million of its counterclaim against the Company would fail. An appeal of all issues appears certain regardless of the outcome at the trial level. The Company is unable to predict the outcome of the litigation at the trial level or upon appeal.

REGULATION

General

The Company is subject to regulation by the PUC, who has the power, among other things, to establish rates and conditions of service, to regulate security issues and to prescribe uniform systems of accounts to be kept by public utilities.

The Company is subject to the jurisdiction of the FERC with respect to the transmission of electric energy in interstate commerce and the sale of electric energy at wholesale for resale, as well as with respect to licensed hydroelectric projects and certain other matters.

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The Company is also subject to regulation by the Oregon Department of Energy ("DOE") with respect to contingency planning for energy supplies and curtailment of load. The Company is required to submit forecasts of its energy loads and resources in connection with the statutory duty of DOE to publish an annual forecast of the energy situation as it affects the State of Oregon. The fourth annual report of DOE indicates, among other things, that the future electric energy requirement in the State of Oregon is expected to be about the same as that presently forecast by the Company.

Oregon law provides that any city or town may fix for a period of not more than 5 years rates which may be charged by an electric utility therein. No city or town in which the Company furnishes service has attempted to fix a schedule of rates applicable to the Company under such law. In January 1979, the City of Portland issued a report which concludes that the residents of the City would not likely benefit if the City did exercise any right it may have to set rates. See however "Business—Power Supply—*Proposals for Reallocation of Federal Power*" for a proposal by the City of Portland to create a municipal utility system to serve residents of the City of Portland.

Rates

On January 14, 1980, the PUC granted the Company a rate increase of 17.7 percent. The increase is the first phase (Phase I) of a four-phase rate action approved in principle in the order. The PUC authorized a 15.17 percent rate of return on common equity and an 11.15 percent return on rate base. While the PUC recognized the increased risk that is now attendant to utility operation, he also remarked that future nuclear plants may be environmentally unacceptable and cautioned against making substantial investment in a plant before receiving siting authority.

Phase II of the order authorizes the collection of the Bonneville wholesale price increase. Since January 1, 1980, the increased expense, including interest, resulting from the BPA rate increase has been deferred. This deferral continued until July 1, 1980. On May 30, 1980 the Company filed tariffs incorporating a permanent increase of 3.2 percent in all retail sales to cover the cost of the BPA increase subsequent to July 1, 1980 plus a temporary increase of 1.2 percent to recover the cost of the BPA increase prior to July 1, 1980. These tariffs became effective July 1, 1980.

Phase III of the order covers the added costs of the Boardman Coal Plant when it becomes operational. On June 16, 1980 the Company filed a tariff for a 19.8 percent increase to take effect when the Boardman Coal Plant becomes operational, presently expected to be in August, 1980.

Phase IV of the order requires that the current rates will be adjusted up or down to reflect the outcome of lawsuits in which the Company is challenging certain property tax assessments. This phase involves very little money.

Environmental Matters

The Company is subject to regulation by federal, state and local authorities with regard to air and water quality control, noise and other environmental factors. The Company is also subject to the Rivers and Harbors Act of 1899, under which the Company must obtain permits from the U.S. Army Corps of Engineers to construct facilities on navigable waters. Oregon state agencies which have direct jurisdiction over environmental matters include the Environmental Quality Commission ("EQC"), the Department of Environmental Quality ("DEQ") and the EFSC which has jurisdiction over the siting and operation of energy facilities and the accumulation, storage, disposal and transportation of wastes, including nuclear wastes.

On December 14, 1979, the DEQ issued a new air contaminant discharge permit for the combustion turbines at the Bethel plant. The new permit is for a period of 5 years and allows commercial operation of the plant for up to 2,000 hours per year. Both units of the plant may be operated during daytime hours, but operation at night is limited to 50 percent of plant capacity. The permit authorizes the plant to operate on either natural gas or oil.

The Company's Air Contaminant Discharge Permit for the Harborton turbines expired September 1, 1975, and the Company applied to the DEQ for a renewal permit. When DEQ indicated its intent to recommend denial of such a permit the Company requested, as provided by statute, a hearing on the matter. The hearing is still in a preliminary stage. If the EQC sustains the DEQ's proposed denial, the Company has the right to appeal such a decision in the Oregon courts. The City of Portland has also sought to exercise authority over the operation of the Harborton turbines. On November 28, 1979, the City of Portland adopted an ordinance granting the Company a temporary conditional-use permit for the operation of the Company's combustion turbine generators at its Harborton site. The ordinance requires the issuance of an air quality permit by the DEQ and declaration of a power supply emergency by the PUC. It also (a) prohibits operation of the plant on any fuel other than natural gas, (b) requires the Company to remove the plant from its present site by May 1, 1981 and (c) prohibits the Company from including the cost of such removal in its rate base. The Company agreed to these conditions. In addition, the DEQ granted an air quality permit for emergency operation, and the PUC subsequently declared an energy emergency. As a result, on December 11, 1979, the plant was put into operation. On December 24, 1979, the Harborton plant reached the air quality limit specified in the permit issued by DEQ for emissions of carbon monoxide during emergency operation and was closed down. Pursuant to certain emergency provisions of the Federal Clean Air Act, on December 22, 1979, the Governor of Oregon asked President Carter for a suspension of applicable air quality emission limits. The President signed an executive order suspending such limits on December 27, 1979, and the plant was put back into operation that day. The suspension remained in effect until February 7, 1980. To operate the plant during any subsequent emergency, the Company must reapply for suspension of applicable air quality emission limits. Because of the above-mentioned regulatory difficulties and the City of Portland ordinance, the Company is presently studying the feasibility of moving or selling some or all of the turbines at the Harborton plant.

The Company estimates minimum capitalized expenditures for environmental purposes of at least \$17,000,000, \$18,000,000 and \$19,000,000 in the years 1980, 1981 and 1982 respectively. During 1979, costs and taxes associated with environmental protection facilities and environmental protection programs which were charged to Operating Expenses and Taxes are estimated to have aggregated approximately \$18,000,000. The amount of such costs and taxes for 1980 and future years cannot presently be forecast.

Federal Energy Legislation

The United States Congress has enacted energy legislation which, among other things, establishes national standards for consideration by state regulatory agencies in determining utility rates and imposes other requirements on the operations of utilities. The legislation requires state regulatory agencies to hold evidentiary hearings with respect to the desirability of implementing various rate structures, the use of automatic rate adjustment clauses and other matters. Because of the complexity of the legislation and the uncertainties in its interpretation and implementation, the effect of the legislation on the Company cannot be predicted.

REPORT OF INDEPENDENT PUBLIC ACCOUNTANTS

To Portland General Electric Company:

We have examined the consolidated balance sheets and statements of capitalization of Portland General Electric Company (an Oregon corporation) and subsidiaries as of December 31, 1979 and 1978, and the related consolidated statements of income, retained earnings and changes in financial position for each of the five years ended December 31, 1979. Our examinations were made in accordance with generally accepted auditing standards and, accordingly, included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

In our opinion, the financial statements referred to above present fairly the financial position of Portland General Electric Company and subsidiaries as of December 31, 1979 and 1978 and the results of their operations and the changes in their financial position for each of the five years ended December 31, 1979 in conformity with generally accepted accounting principles, which, except for the change (with which we concur) in the method of recording revenues as described in Note 1 (Revenues), have been applied on a consistent basis.

ARTHUR ANDERSEN & CO.

Portland, Oregon February 15, 1980.

PORTLAND GENERAL ELECTRIC COMPANY AND SUBSIDIARIES Consolidated Balance Sheets

ASSETS

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Electric utility plant-original cost	(Thousands	of Dollars)
In service		
Production	\$ 597,917	\$ 580,710
Transmission	134,495	133,310
Distribution	385,104	354,289
General	58,975	49,858
	1,176,491	1,118,167
Accumulated depreciation (Note 1)	(203,572)	(173,097)
	972,919	945,070
Construction work in progress (Note 6)	617,300	463,274
Nuclear fuel, less accumulated amortization		
of \$29,476 and \$16,278 (Note 1)	68,578	74,518
	1,658,797	1,482,862
Other property and investments	20,955	12,300
Current assets		n an
Cash	4,909	4,387
Receivables	4,909	4,007
	28,120	22,477
Other accounts and notes	4,625	5,886
Reserve for uncollectible accounts	(234)	(536)
Estimated unbilled revenues (Note 1)	21,781	20,209
Materials and supplies, at average cost	,	_0,_00
Fuel oil	28,591	5,668
Other	13,187	11,585
Property taxes applicable to subsequent periods	9,697	9,402
Prepayments	7,394	2,342
Deferred power costs (Note 1)	7,320	
	125,390	81,420
Deferred charges	16,186	11,456
	\$1,821,328	\$1,588,038

PORTLAND GENERAL ELECTRIC COMPANY AND SUBSIDIARIES Consolidated Balance Sheets

CAPITALIZATION AND LIABILITIES

	December 31, 1979	December 31, 1978
	(Thousands	of Dollars)
Capitalization (see accompanying statements) Common stock equity Cumulative preferred stock Long-term debt	\$ 551,612 150,000 754,441	\$ 478,759 151,500 735,119
	1,456,053	1,365,378
Current liabilities		
Long-term debt due within one year (Note 5) Current sinking fund—preferred stock (Note 3) Bank loans (Note 4) Accounts payable and other accruals Wages and salaries payable Accrued interest Dividends payable Accrued general taxes Accrued income taxes Deferred income taxes (Note 1)	$50,988 \\ 1,500 \\ 130,000 \\ 98,551 \\ 2,081 \\ 15,414 \\ 16,814 \\ 18,918 \\ 865 \\ 11,392 \\ 346,523 \\ \end{array}$	9,714 3,000 71,000 68,933 1,685 11,773 14,588 15,708 457 9,375 206,233
Other		
Deferred income taxes (Note 1) Deferred investment tax credits (Note 1)	14,673 2,366	12,650 2,468
Miscellaneous	1,713	1,309
	18,752	16,427
	\$1,821,328	\$1,588,038

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PORTLAND GENERAL ELECTRIC COMPANY AND SUBSIDIARIES Consolidated Statements of Capitalization

	December 31, 1979		December 31, 1978	
Common Stock Equity (Note 3)	(Tho	usands of Do		
Common stock, \$3.75 par value per share,				
50,000,000 shares authorized,				
31,435,856 and 25,995,935 shares outstanding	\$ 117,884		\$ 97,485	
Other paid-in capital			290,197	
Capital stock expense			(3,841)	
Retained earnings			94,918	
	551,612	97 0.07		9510
Cumulative Dupformed Steels (Nate 2)	001,012	37.9%	478,759	35.1%
Cumulative Preferred Stock (Note 3)				
\$100 par value per share, 2,500,000 shares authorized	10.000		10.000	
9.76% Series, 100,000 shares outstanding			10,000	
7.95% Series, 300,000 shares outstanding	30,000		30,000	
7.88% Series, 200,000 shares outstanding	20,000		20,000	
8.20% Series, 200,000 shares outstanding	20,000		20,000	
11.50% Series, 195,000 and 225,000 shares				
outstanding			22,500	
Current sinking fund on 11.50% Series	(1,500)		(3,000)	
8.875% Series, 270,000 shares outstanding	27,000		27,000	
\$25 par value per share, 6,000,000 shares authorized				
\$2.60 Series, 1,000,000 shares outstanding	25,000	*	25,000	
	150,000	10.3	151,500	11.1
Long-term Debt (Note 5)				
First mortgage bonds				· · · · · ·
Maturing 1980 through 1985	ang Serie ang Peres	$(1,1) \in \{1,1,2,\dots,n\}^{M_{n+1}}$		
$10\frac{1}{2}$ % Series due December 1, 1980	40,000		40,000	
10% Series due April 1, 1982		the second	40,000	
3%% Series due November 1, 1984			7,126	
9%% Series due June 1, 1985			27,000	
Maturing 1986 through 1990-41/4 %-51/4 %			28,980	
Maturing 1991 through 199545% % -51% %			67,645	
Maturing 1996 through 2000-578%-978%			190,142	
Maturing 2001 through 2005—734 %-1158 %			142,000	
Maturing 2006 through 2007-834.%-91/2 %	100,000		100,000	
Pollution control bonds, Port of St. Helens, Oregon,				
$7\frac{3}{4}$ %, due 2006 (guaranteed by Company)	12,735		12,735	
Pollution control bonds, Port of Morrow, Oregon,				
63%%, due 2008 (guaranteed by Company)	34,000		34,000	
Amount held by trustee			(26,849)	
10% notes due March 1, 1984	50,000			
Trojan trust notes			51,713	
Boardman loan agreement			30,000	
Other			1,148	
	806,193		745,640	
Unamortized premium and discount—net			(807)	
Chamorazoa promana ana alocount-net			Management and an an and a second sec	
The sector was delived as the sector se	805,429		744,833	
Long-term debt due within one year	weight the second se		(9,714)	
	754,441	51.8	735,119	53.8
Total capitalization	\$1,456,053	100.0%	\$1,365,378	100.0%
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Consolitat	eu Duaveniei	its of frecame	a 13ai militigo	the second second	and the State	
		Years				
	1979	1978	1977	1976	1975	
	e The Alfred States and Alfred States Alfred States and Alfred Sta	(The	(Thousands of Dollars)			
Balance at beginning of year	\$ 94,918	\$ 94,978	\$108,146	\$ 97,901	\$ 84,626	
Net income	46,122	56,629	36,988	52,021	46,003	
	141,040	151,607	145,134	149,922	130,629	
Deduct Dividends declared				En mandagen net en notifis interden manae		
Common stock	53,130	42,514	36,408	29,964	22,910	
Preferred stock	13,830	14,175	13,748	11,812	9,818	
	66,960	56,689	50,156	41,776	32,728	
Balance at end of year	\$ 74,080	\$ 94,918	\$ 94,978	\$108,146	\$ 97.901	

PORTLAND GENERAL ELECTRIC COMPANY AND SUBSIDIARIES Consolidated Statements of Retained Earnings

PORTLAND GENERAL ELECTRIC COMPANY AND SUBSIDIARIES Consolidated Statements of Changes in Financial Position

		Years 1	Ended Decomb	er 31	
	1979	1978	1977	1976	1975
		(Tho	usands of Dolls	118)	· · · · · ·
SOURCE OF FUNDS					
Current operations					
Income before cumulative effect of		+ /o =o /			*
change in accounting policy	\$ 46,122	\$ 48,784	\$ 36,988	\$ 52,021	\$ 46,003
Noncash charges (credits) to income		05 000	00 7 10	04 500	10.000
Depreciation and amortization	46,840	35,008	39,548	24,708	13,890
Deferred income taxesnet	11,293	1,018	7,683	8,167	5,129
Reserve transferred to revenue					(1,989)
Allowance for equity funds used	(07.445)	(0.050)	(~ 0.00)	((0.00)	(0.017)
during construction	(27,445)	(9,058)	(5,089)	(4,360)	(6,317)
Othernet	2,799	3,038	(214)	138	134
	79,609	78,790	78,916	80,674	56,850
Cumulative effect of change in					
accounting policy (Note 1)		7,845			
Funds provided internally	79,609	86,635	78,916	80,674	56,850
Proceeds from external financing					
Long-term debt	102,672	116,795	157,978	120,104	122,861
Preferred stock			27,000	27,375	30,000
Common stock	93,834	68,459	62,532	65,774	29,770
Short-term borrowings—net	59,000	26,000	(25,650)	(57,284)	32,143
Sale/leaseback of assets (Note 7)	20,246	50,310			
	\$355,361	\$348,199	\$300,776	\$236,643	\$271,624
APPLICATION OF FUNDS					
Gross utility construction	\$254,289	\$278,265	\$201,896	\$191,475	\$182,513
Reimbursement for prior years'	φ20 4 ,200	Ψ210,200	φ201,000	φ101,110	ψ102,010
construction expenditures			<u></u>	(18,940)	
Allowance for equity funds used				(10,010)	
during construction	(27,445)	(9,058)	(5,089)	(4,360)	(6,317)
during construction and and and	226,844	269,207	196,807	168,175	176,196
Headquarters complex construction	220,044	200,201	9,259	21,342	18,982
Dividends declared	66,960	56,689	50,156	41,776	32,728
Retirement of long-term debt and	00,000	00,000	00,100	41,170	04,120
preferred stock	45,119	45,666	54,156	4,480	40,124
Miscellaneous-net		8,459	(11)	2,812	1,219
Increase (decrease) in working capital	10,004	0,100	(/	2,012	1,210
excluding current maturities, sinking					
funds, and short-term borrowings					
Cash		(681)	(2,966)	(3,675)	6
Receivables		7,457	(3,981)	5,802	7,404
Estimated unbilled revenues	•	20,209			.,
Materials and supplies	•	(5,776)	7,209	(13,308)	7,309
Accounts payable and accruals		(50,810)	(13,171)	7,886	(13,824)
Other—net		(2,221)	3,318	1,353	1,480
	\$355,361	\$348,199	\$300,776	\$236,643	\$271,624
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Note 1. Summary of Accounting Policies

The Company's accounting policies conform to generally accepted accounting principles for regulated public utilities and are in accordance with the accounting requirements and the ratemaking practices of the regulatory authorities having jurisdiction.

Consolidation Principles—The financial statements include the accounts of the Company and its wholly owned subsidiaries. Intercompany balances and transactions have been eliminated.

Revenues—Prior to 1978, revenues were recorded as customers were billed, principally on a cycle basis throughout each month. This resulted in unrecorded revenue at the end of an accounting period. The changes in unrecorded revenue from year to year were generally not significant. Due to the accelerating increase in rate levels and costs, the disparity between billed revenues and costs increased significantly. Accordingly, effective January 1, 1978, the Company changed to a method of accounting to accrue the amount of estimated unbilled revenues for services provided to the month-end to more closely match revenues and costs. The cumulative effect of the change on years prior to 1978 is \$16,348,000 less income taxes of \$8,503,000.

Allowance for Funds Used During Construction (ADC) — ADC represents the net cost for the period of construction of borrowed funds used for construction purposes and a reasonable rate on other funds used. ADC is capitalized as part of the cost of utility plant and is credited to income but does not represent current cash earnings. The allowance for borrowed funds used during construction is calculated on a pre-tax basis. ADC is not capitalized for income tax purposes.

Effective January 1, 1977, the Federal Energy Regulatory Commission (FERC) established a formula to determine the maximum allowable ADC rate and ordered that the allowance for borrowed funds used during construction be credited to interest charges and that the allowance for other (equity) funds used during construction be credited to other income. A 7 percent ADC rate was used on all construction expenditures until November 15, 1977 when the maximum rate allowed under the FERC order was adopted for certain construction projects. Effective January 1, 1979, the maximum rate (11.5 percent for 1979) was adopted for all construction expenditures.

Depreciation—Depreciation provisions are based upon the estimated service lives of the various classes of plant and property in service. Prior to January 1, 1979, depreciation on generating plants placed in service after 1975 and transportation equipment was computed on a straight-line basis. Depreciation on the remaining plant and property in service, including substantial hydroelectric facilities, was computed on the 5 percent sinking fund method. The Company's sinking fund method yielded depreciation substantially the same as straight-line depreciation. Effective January 1, 1979, depreciation on all plant and equipment in service has been computed on a straight-line basis. Depreciation expense as a percent of the related average depreciable plant and property in service balances approximated 2.4 percent in 1975, 2.8 percent in 1976, and 3.0 percent in 1977, 1978 and 1979.

Depreciation of the Trojan Nuclear Plant includes provisions for estimated decommissioning costs. Such provisions are included in current rates to customers based on estimated decommissioning costs of approximately \$17,000,000. The Company and the Public Utility Commissioner of Oregon (Commissioner) are continuing to review the decommissioning costs estimate and it is expected that any increase in such costs will be provided for in future rate increases.

The cost of renewals and replacement of property units are charged to plant and repairs and maintenance are charged to expense. Property units retired, other than land, are charged to accumulated depreciation.

Amortization of Nuclear Fuel—The cost of nuclear fuel is amortized to expense based on the quantity of heat produced for the generation of electric energy. Effective January 1, 1979, the Commissioner has allowed increased revenues to provide for the estimated cost of permanent storage, including such cost for fuel consumed in prior years.

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PORTLAND GENERAL ELECTRIC COMPANY AND SUBSIDIARIES NOTES TO FINANCIAL STATEMENTS (Continued)

Retirement Plan—The Company has a noncontributory retirement plan for its employees. Total plan costs were \$1,840,000, \$2,758,000, \$3,162,000, \$3,290,000 and \$3,865,000 for the years 1975 through 1979. The plan was amended effective July 1, 1978 and at January 1, 1979 (latest actuarial valuation date), the unfunded actuarial liability was estimated to be \$15,000,000 and is being amortized over a 30-year period. At January 1, 1979 the actuarially computed present value of vested benefits exceeded the actuarial value of the plan assets by approximately \$2,000,000. The unfunded actuarial liability, the present value of vested benefits and the actuarial value of the plan assets had not changed materially at December 31, 1979.

In addition to the retirement plan, the Company has a group life insurance plan which provides life insurance benefits to both current and retired employees. The unfunded liability for post-retirement life insurance benefits at January 1, 1979 is estimated at \$5,900,000. Employees contribute to the cost of insurance premiums through a fixed rate based upon the amount of insurance benefit and the balance of such cost is paid by the Company. During 1980, rates charged to customers include provisions to fund this liability over future periods.

Deferred Power Cost—Effective November 15, 1979, the Commissioner issued an order for a permanent power cost adjustment (PCA) tariff which provides for rate changes either up or down to the extent that certain power costs deviate from those included in the Company's general rate tariffs. The PCA covers two types of cost changes: (a) changes in the unit price of oil and gas used for combustion turbine generation; and (b) changes in the unit price of power purchased from other companies. The PCA provides that 80 percent of the costs associated with unit price changes, above or below those included in the general tariffs, be collected or refunded through an adjustment to customers' bills. Cost deviations greater than the total monthly adjustment are deferred and amortized to income during subsequent periods.

Income Taxes—Deferred income taxes are provided for timing differences between financial and income tax reporting to the extent permitted by the Commissioner for ratemaking purposes. Flowthrough accounting is followed for other reductions of income taxes resulting from various provisions in the tax laws, primarily accelerated depreciation. Flow-through accounting has the effect of passing such reductions on to the Company's customers. Portions of deferred income taxes are classified as current liabilities to the extent the related assets are current. See Note 2 for details of major deferred tax items.

Tax reductions resulting from investment tax credits are amortized to income over a 30-year period, the approximate life of the related properties. The Company estimates it has approximately \$55,000,000 of investment tax credit carryforwards available for application against any future Federal income tax payments. Approximately \$29,000,000 of these carryforwards expire in 1982, and the balance expires in varying amounts during the years 1983 through 1986.

Note 2. Income Tax Expense

The following table shows the detail of taxes on income and the items used in computing the differences between the statutory Federal income tax rate and the Company's effective rate.

		- -			
	1979	1978	1977	1976	1975
		(Thou	isands of Doll	ars)	
Utility					
Currently payable	\$ 143	\$ (25)	\$(1,045)	\$(1,727)	\$(3,637)
Capitalized interest	7,943	3,342	4,433	4,013	6,529
Liberalized depreciation	3,361	1,354	2,409	2,787	630
Deferred power costs	1,810		********		i
Other	(855)	400	(457)	(541)	(540)
Investment tax credit adjustments	(102)	(103)	(334)	(22)	(1,489)
Total utility	12,300	4,968	5,006	4,510	1,493
Nonutility					
Currently payable	26 5	(8)	(379)	(42)	316
Deferred income taxes	1,153	(3,103)	1,632	1,930	
Total nonutility	1,418	(3,111)	1,253	1,888	316
	13,718	1,857	6,259	6,398	1,809
Cumulative effect of accounting change					
Deferred income taxes		8,503	- 	· · · · · ·	
Total income tax expense	\$13,718	\$10,360	\$ 6,259	\$ 6,398	\$ 1,809
Computed tax based on statutory federal	<u> </u>	φ10,000	φ 0,200	φ 0,000	φ 1,000
income tax rates applied to income					
before income taxes and cumulative					
effect of accounting change	\$27.526	\$24,307	\$20,758	\$28,041	\$22,950
Less reductions in taxes resulting	φ21,020	421,001	<i>420</i> ,100	Ψ20,011	φ22,000
from flow-through items					
Excess tax over book					
depreciation	6,019	12,921	7,319	15,447	13,263
Items capitalized for books	-,	,	· ,	,	20,200
and expensed for tax		2,210	2,007	2,308	2,503
Allowance for equity funds used			,	,	
during construction	12,699	6,612	4,274	3,649	4,698
Other	(4,910)	707	899	239	677
	\$13,718	\$ 1,857	\$ 6,259	\$ 6,398	\$ 1,809
Company's effective rate	22.9%	3.7.%	14.5%	11.0%	3.8%
Company Bonconto rato	2210 /0	0	11.0 /0	70	0.0 /0

The Company has a Federal income tax net operating loss carryforward of approximately \$41,000,000 expiring principally in 1985 and 1986. Deferred taxes will be recorded to the extent that the loss carryforward is realized in the future.

It is anticipated that cash outlays for income taxes will not exceed income tax expense during each of the next three years.

Note 3. Common and Preferred Stock

The following changes occurred in the common stock, cumulative preferred stock and other paid-in capital accounts (dollar amounts in thousands).

	Common	Common Stock Cumulative Preferr		ferred Stock			
	Number of Shares	\$3.75 Par Value	Number of Shares	\$100 Par Value	Number of Shares	\$25 Par Value	Other Paid-in Capital
Outstanding,						1 9-00-0-11 11-0-1-0-0	······
December 31, 1974	13,500,000	\$ 50,625	800,000	\$ 80,000		\$	\$108,146
Sales of stock	2,000,000	7,500	300,000	30,000			22,270
December 31, 1975	15,500,000	58,125	1,100,000	110,000			130,416
Sales of stock	3,559,909	13,350			1,000,000	25,000	54,799
Redemption of stock			(15,000)	(1,500)			
December 31, 1976	19,059,909	71,475	1,085,000	108,500	1,000,000	25,000	185,215
Sales of stock	3,177,428	11,915	270,000	27,000			50,617
Redemption of stock			(30,000)	(3,000)	-		-
December 31, 1977	22,237,337	83,390	1,325,000	132,500	1,000,000	25,000	235,832
Sales of stock	3,758,598	14,095	-			-	54,365
Redemption of stock			(30,000)	(3,000)			_
December 31, 1978	25,995,935	97,485	1,295,000	129,500	1,000,000	25,000	290,197
Sales of stock	5,439,921	20,399		_			73,434
Redemption of stock			(30,000)	(3,000)		·	
December 31, 1979	31,435,856	\$117,884	1,265,000	\$126,500	1,000,000	\$25,000	\$363,631

Cumulative preferred stock outstanding is redeemable at the option of the Company as follows: 9.76% Series at \$110 to November 1, 1980; 7.95% Series at \$105 to July 1, 1982; 7.88% Series at \$106 to April 1, 1983; 8.20% Series at \$106 to July 1, 1983; 11.50% Series at \$108 to January 15, 1985; 8.875% Series at \$108 to April 30, 1980 and \$2.60 Series at \$30 to April 1, 1981. Each Series is redeemable at reduced amounts after such respective dates.

Mandatory sinking fund requirements on the 11.50% and 8.875% Series preferred stock are \$1,500,000 through 1982 and \$3,300,000 from 1983 through 1992. The Company has the option to retire additional shares through the sinking funds.

At December 31, 1979, the Company had reserved 1,490,440 authorized but unissued shares of common stock for issuance under its dividend reinvestment and common stock purchase plan and 77,934 authorized but unissued shares of common stock for issuance under its employee stock purchase plan.

Note 4. Short-Term Borrowings

At December 31, 1979, short-term borrowings of \$130,000,000 include \$105,000,000 under agreements with domestic banks and \$25,000,000 with foreign banks. At December 31, 1978 short-term borrowings of \$71,000,000 include \$21,000,000 domestic and \$50,000,000 foreign under the agreements.

Under a domestic credit agreement, the Company can borrow, repay and reborrow up to a maximum of \$100,000,000. This 5-year agreement expires July 31, 1984 unless the Company exercises a 3year term option. At the Company's option, interest rates on borrowing are based (i) on the London interbank offered rate (LIBOR) at the time of each borrowing or (ii) on the higher of the prime commercial or the 90-119-day prime commercial paper rate plus $\frac{1}{2}$ of 1% (Base Rate). Interest rates during the first 2 years of the agreement are as follows:

Utilization	LIBOR	Base Rate
Up to \$50 million	LIBOR plus 3% of 1 %	Base Rate
\$50 up to \$100 million	LIBOR plus ½ cf 1%	105% of Base Rate

The agreement provides for a commitment fee of $\frac{1}{2}$ of 1% per annum on the unused commitment and a facility fee determined by multiplying \$1,050,000 at the end of each quarter by the average daily Base Rate.

The Company has other domestic lines of credit totaling \$25,000,000. Borrowings under the lines are at the prime commercial rate. It is understood that compensating cash balances equal to 10% of the lines will be maintained; however, there are no legal restrictions as to the withdrawals of such balances.

Under the foreign credit agreement, which expires on October 31, 1980, the Company may borrow up to a maximum of \$50,000,000. The interest rate on borrowings is $\frac{3}{4}$ of 1% above the London interbank offered rate at the time of each borrowing. There is a commitment fee of $\frac{1}{2}$ of 1% pcr annum on the unused commitment if utilization is less than 50% and $\frac{3}{6}$ of 1% if utilization is 50% or higher.

Average daily amounts of short-term borrowings outstanding during 1979 and 1978 were \$55,876,000 and \$69,685,000; weighted average daily interest rates on such amounts were 13.2% and 9.8%; weighted average interest rates at December 31, 1979 and 1978 were 15.7% and 12.1%. The maximum amount of short-term borrowings outstanding during 1979 and 1978 was \$130,000,000 and \$100,000,000. The interest rates exclude the effect of commitment fees, facility fees, and compensating cash balances.

Note 5. Long-Term Debt

The Indenture securing the Company's first mortgage bonds constitutes a direct first mortgage lien on substantially all utility property and franchises other than expressly excepted property and a portion of the Boardman Coal Plant.

Under an agreement with a trust, the Company finances its fuel for the Trojan Nuclear Plant. In addition, the trust can provide funds, not to exceed 40% of the trust's assets, to the Company on its promissory note issued to the trust. The maximum financing provided by the agreement is \$100,000,000. The fuel notes are repaid as the fuel is consumed and all borrowings, including those on the promissory note, are due March 1, 1982 at the earliest or March 1, 1988 at the latest. At December 31, 1979, the weighted average interest rate on outstanding notes was 14.8%. The estimated current portion of the fuel notes (\$9,055,000) is included in current liabilities.

To finance a portion of the Company's share of costs for the Boardman coal plant, a wholly owned subsidiary of the Company entered into a \$125,000,000 loan agreement with a group of banks. Loans under the agreement are secured by plant and are guaranteed by the Company. The interest rate on borrowings is equal to 117% of the prime commercial rate. There is a commitment fee of 1/2 of 1% per annum on the unused commitment. Any loans outstanding at completion of the project or December 31, 1981, whichever is earlier, are to be paid in six equal semiannual installments.

The following principal amounts of long-term debt become due for redemption through sinking funds and maturities during the years 1980 through 1984.

	Long-term Debt	
	Sinking Funds	Maturities
	(Thousands of Dollars)	
1980	\$3,634	\$40,000
1981	4,300	-
1982	9,041	40,000
1983	9,541	
1984	9,301	56,480

The sinking funds include \$1,701,000 in 1980, \$2,201,000 in 1981, \$2,701,000 in 1982, \$3,201,000 in 1983 and \$3,201,000 in 1984 which, in accordance with the terms of the Indenture, the Company anticipates satisfying by pledging available additions equal to $166\frac{2}{3}\%$ of the sinking fund requirement.

Note 6. Financing and Construction

The Company's utility construction program, which is subject to continuing review and adjustment, is estimated in the range of \$875,000,000 to \$975,000,000 for the years 1980-1982 (including ADC and nuclear fuel). This estimate is based on the Company's present plans for joint ownership of certain future generating facilities (see table on page B-13).

The Company presently expects that for the above 3-year period approximatly 85% to 90% of its construction costs will require external financing including the sale of equity and debt securities. The issuance of additional preferred stock or first mortgage bonds requires the Company to meet certain earnings coverage provisions. Presently the Company is unable to issue preferred stock and may be unable to do so during the balance of 1980. The ability to meet the earnings coverage provisions to issue additional preferred stock and first mortgage bonds is primarily dependent upon improved earnings for 1980 and upon the adequacy and timeliness of rate relief thereafter.

In the absence of adequate and timely rate relief, the Company will consider reducing its construction program through the sale of partial interests in future generating units and/or the delay in the construction of future facilities, which could impair the quality and reliability of service to its customers.

Construction work-in-progress includes the Company's share of the Pebble Springs and Skagit nuclear projects. A summary of the expenditures as of December 31, 1979 follows:

	Pebblo Springs (Thousands	<u>Skagit</u> of Dollars)
Equipment	\$ 54,221	\$39,960
ADC	25,789	17,440
Other—including engineering and licensing	33,370	32,324
	\$113,380	\$89,724

The above projects have been significantly delayed due to regulatory proceedings and litigation relating to federal and state laws and regulations, including environmental considerations. As a result of the accident in 1979 at the Three Mile Island nuclear plant in Pennsylvania, additional delays at both the federal and state level were encountered which made it necessary to reschedule the estimated completion dates for these projects until the early 1990s. These delays will increase substantially the estimated cost of the projects.

Although the outcome of regulatory proceedings and litigation cannot be predicted with certainty, management presently believes the two projects will ultimately be built. If the necessary licensing of a particular project cannot be obtained, then subject to regulatory approval, the Company would either attempt to transfer the project to another location and obtain construction approval and/or amortize any abandonment costs for accounting and ratemaking purposes over an approved length of time.

The Commissioner, in a recent order involving minor expenditures of another Oregon electric utility, stated that Ballot Measure 9 (adopted by the voters of Oregon in the 1978 general election) caused the shareholders to assume the risks associated with planning and constructing new plants until the plant is placed in service. In addition, the order stated that if a plant is not completed and is abandoned, the related costs would not be allowed for ratemaking purposes. The Company and its legal counsel do not agree with this interpretation of the ballot measure, and would contest vigorously any attempt to apply it to any projects abandoned prior to being placed in service.

Note 7. Commitments and Contingencies

(a) Utility construction expenditures for 1980 are presently estimated at \$300,000,000 to \$325,000,000. Purchase commitments outstanding, relating principally to construction, totaled approximately \$265,000,000 at December 31, 1979. Cancellation of the purchase commitments could result in

substantial cancellation charges. Other substantial commitments have been made under long-term agreements to provide nuclear fuel for the Trojan nuclear plant and proposed additional nuclear plants and to provide coal for the Boardman coal plant. Such agreements may be terminated and would require payment of termination charges.

(b) The Company has entered into long-term power purchase contracts, expiring between 2005 and 2018, with certain public utility districts in the state of Washington. Power purchase prices are based on the Company's proportionate share of the operating and debt service costs of each project whether or not operable. Significant statistics regarding those hydroelectric projects are as follows:

	Rocky Reach	Priest Rapids	Wanapum	Wells
Revenue Bonds				
Amount sold to finance projects	\$313,100,000	\$166,000,000	\$197,000,000	\$207,600,000
Outstanding at December 31, 1979	\$213,974,000	\$112,248,000	\$135,600,000	\$192,200,000
Company's current share of output,				
capacity and cost				
Percentage of output	12.0%	17.1%*	21.9%*	30.5%*
Capacity in megawatts, based on				
nameplate rating	142	135	182	236
Estimated current annual cost,		11		
including debt service**	\$ 2,600,000	\$ 2,300,000	\$ 3,000,000	\$ 4,600,000
Completion date	19 71	1961	1964	1969
Date of long-term contract expiration	2011	2005	2009	2018

* The Company's percentage of output of Priest Rapids and Wanapum may be reduced by August 31, 1983 to 13.9% and 18.7% and Wells may be reduced to 20.3% by 1988.

** Annual cost will change in proportion to the percentage of output allocated to the Company.

In 1979 the Company entered into a long-term power purchase contract, expiring in 2017, with the City of Portland, Oregon, for 100% of the power from a hydroelectric project to be constructed. Power purchase prices cover the operating and debt service costs of the project whether or not operable. The City of Portland sold \$38,000,000 of revenue bonds to finance the project. The Company will commence paying debt service costs in 1982.

(c) The minimum annual rental commitments of the Company under noncancelable leases at December 31, 1979 are as follows:

	Basic	Non- capitalized Financing Leases (Thousands	Sublease Rentals (Credit) s of Dollars)	Total
1980	\$ 10,611	\$ 5,993	\$ (1,942)	\$ 14,662
1981	9,752	5,832	(1,905)	13,679
1982	9,726	5,715	(1,896)	13,545
1983	9,638	5,476	(1,563)	13,551
1984	9,347	4,951	(928)	13,370
Remainder	250,622	64,898	(3,473)	312,047
Total	\$299,696	\$92,865	\$(11,707)	\$380,854

During 1979, the Company entered into a sale/leaseback for its share of the coal handling facilities at the Boardman coal plant for a basic lease term of 25 years. The Company has an option to renew the lease for 5 years at one-half the average lease rate paid during the basic lease term and an additional 15