

[CONFORMED COPY]

NORTHWEST NATURAL GAS COMPANY

TO

BANKERS TRUST COMPANY

AND

J. C. KENNEDY

(SUCCESSOR TO R. G. PAGE),

AND

STANLEY BURG

(HEREIN BECOMING SUCCESSOR TO J. C. KENNEDY)

**As Trustees under the Mortgage and Deed
of Trust, dated as of July 1, 1946, of
Portland Gas & Coke Company (now
Northwest Natural Gas Company)**

Ninth Supplemental Indenture

Dated as of April 1, 1971

NINTH SUPPLEMENTAL INDENTURE

INDENTURE, dated as of the 1st day of April, 1971, made and entered into by and between **NORTHWEST NATURAL GAS COMPANY** (formerly Portland Gas & Coke Company), a corporation of the State of Oregon, whose post office address is 735 S. W. Morrison Street, Portland, Oregon 97205 (hereinafter sometimes called the Company), party of the first part, and **BANKERS TRUST COMPANY**, a corporation of the State of New York, whose post office address is P. O. Box 318, Church Street Station, New York, New York 10015 (hereinafter sometimes called the Corporate Trustee) and **J. C. KENNEDY** (successor to R. G. Page), whose post office address is 73 Gates Avenue, Montclair, New Jersey who is hereby resigning as Co-Trustee effective at the close of business on April 27, 1971, and **STANLEY BURG** (successor hereby to R. G. PAGE and J. C. KENNEDY), whose post office address is 2347 Tiebout Avenue, Bronx, New York 10458 who is hereby appointed successor Co-Trustee effective at the close of business on April 27, 1971, parties of the second part (the Corporate Trustee and the Co-Trustee being hereinafter together sometimes called the Trustees), as Trustees under the Mortgage and Deed of Trust, dated as of July 1, 1946 (hereinafter called the Mortgage), executed and delivered by Portland Gas & Coke Company (now Northwest Natural Gas Company) to secure the payment of bonds issued or to be issued under and in accordance with the provisions of the Mortgage, this indenture (hereinafter called Ninth Supplemental Indenture) being supplemental thereto;

WHEREAS the Mortgage was or is to be recorded in the official records of various counties in the States of Oregon and Washington which counties include or will include all counties in which this Ninth Supplemental Indenture is to be recorded; and

WHEREAS by the Mortgage the Company covenanted that it would execute and deliver such supplemental indenture or indentures and such further instruments and do such further acts as might be necessary or proper to carry out more effectually the purposes of the Mortgage and to make subject to the lien of the Mortgage any property thereafter acquired, made or constructed and intended to be subject to the lien thereof; and

WHEREAS the Company executed and delivered to the Trustees its First Supplemental Indenture, dated as of June 1, 1949 (hereinafter called its First Supplemental Indenture), its Second Supplemental Indenture, dated as of March 1, 1954 (hereinafter called its Second Supplemental Indenture), its Third Supplemental Indenture, dated as of April 1, 1956 (hereinafter called its Third Supplemental Indenture), its Fourth Supplemental Indenture, dated as of February 1, 1959 (hereinafter called its Fourth Supplemental Indenture), its Fifth Supplemental Indenture, dated as of July 1, 1961 (hereinafter called its Fifth Supplemental Indenture), its Sixth Supplemental Indenture, dated as of January 1, 1964 (hereinafter called its Sixth Supplemental Indenture), and its Seventh Supplemental Indenture, dated as of March 1, 1966 (hereinafter called its Seventh Supplemental Indenture); and

WHEREAS said First through Seventh Supplemental Indentures were filed for record, and were recorded and indexed, as a mortgage of both real and personal property, in the official records of various counties in the States of Oregon and Washington which counties include or will include all counties in which this Ninth Supplemental Indenture is to be recorded; and

WHEREAS the Company executed and delivered to the Trustees its Eighth Supplemental Indenture, dated as of December 1, 1969 (hereinafter called its Eighth Supplemental Indenture); and

WHEREAS said Eighth Supplemental Indenture was filed for record, and was recorded and indexed, as a mortgage of both real and personal property, and financing statements were filed, in the official records of the several counties and other offices in the States of Oregon and Washington listed below, as follows:

OREGON

Real Property Mortgage Records

<u>County</u>	<u>Date Filed For Record</u>	<u>Book or Reel</u>	<u>Page</u>
Benton	December 22, 1969	16674	—
Clackamas	December 22, 1969	69-26338	—
Clatsop	December 22, 1969	329	242
Columbia	December 24, 1969	111	722/40
Coos	December 22, 1969	69-12-44746/64	—
Douglas	December 22, 1969	438	283
Hood River	December 22, 1969	691806	—
Lane	December 22, 1969	464R	—
Lincoln	December 22, 1969	16	821
Linn	December 22, 1969	286	493
Marion	December 22, 1969	648	84
Multnomah	December 22, 1969	712	546/64
Polk	December 22, 1969	153	147
Tillamook	December 22, 1969	217	954
Wasco	December 22, 1969	692184 (19)	—
Washington	December 23, 1969	767	57
Yamhill	December 22, 1969	78	36

Filed as a Financing Statement

<u>Office</u>	<u>Date Filed</u>	<u>File Number</u>
Secretary of State	December 18, 1969	13-68031

(An executed counterpart of the Eighth Supplemental Indenture was filed December 18, 1969 in the office of the Auditor of the City of Portland.)

WASHINGTON

Real Property Mortgage Records

<u>County</u>	<u>Date Filed For Record</u>	<u>Book, Film or Reel</u>	<u>Page</u>
Clark	December 22, 1969	399	1
Klickitat	December 22, 1969	102	339-3
Skamania	December 22, 1969	48	53

Filed as a Financing Statement

<u>Office</u>	<u>Date Filed</u>	<u>File Number</u>
Secretary of State	December 18, 1969	81256

and

WHEREAS an instrument dated as of June 14, 1951, was executed by the Company appointing J. C. Kennedy as Co-Trustee in succession to said R. G. Page, resigned, under said Mortgage and by J. C. Kennedy accepting the appointment as Co-Trustee under said Mortgage in succession to the said R. G. Page, which instrument was recorded in various counties in the States of Oregon and Washington; and

WHEREAS in addition to the property described in the Mortgage, as heretofore supplemented, the Company has acquired certain other property, rights and interests in property; and

WHEREAS, the Company has heretofore issued, in accordance with the provisions of the Mortgage, as supplemented, the following series of First Mortgage Bonds:

<u>Series</u>	<u>Principal Amount Outstanding</u>
3½ % Series due 1976.....	\$10,000,000
3½ % Series due 1974.....	\$ 2,100,000
4 % Series due 1974.....	None
4¾ % Series due 1976.....	\$ 2,190,000
5½ % Series due 1984.....	\$ 5,744,000
5½ % Series due 1986.....	\$ 5,677,000
4¾ % Series due 1989.....	\$ 6,580,000
5¾ % Series due 1991.....	\$15,569,000
9¾ % Series due 1974.....	\$15,000,000;

and

WHEREAS Section 8 of the Mortgage provides that the form of each series of bonds (other than the First Series) issued thereunder shall be established by Resolution of the Board of Directors of the Company; that the form of such series, as established by said Board of Directors, shall specify the descriptive title of the bonds and various other terms thereof; and that such Series may also contain such provisions not inconsistent with the provisions of the Mortgage as the Board of Directors may, in its discretion, cause to be inserted therein expressing or referring to the terms and conditions upon which such bonds are to be issued and/or secured under the Mortgage; and

WHEREAS Section 120 of the Mortgage provides, among other things, that any power, privilege or right expressly or impliedly reserved to or in any

way conferred upon the Company by any provision of the Mortgage, whether such power, privilege or right is in any way restricted or is unrestricted, may (to the extent permitted by law) be in whole or in part waived or surrendered or subjected to any restriction if at the time unrestricted or to additional restriction if already restricted, and the Company may enter into any further covenants, limitations or restrictions for the benefit of any one or more series of bonds issued thereunder, or the Company may cure any ambiguity contained therein or in any supplemental indenture or may (in lieu of establishment by Resolution as provided in Section 8 of the Mortgage) establish the terms and provisions of any series of bonds other than said First Series, by an instrument in writing executed and acknowledged by the Company in such manner as would be necessary to entitle a conveyance of real estate to record in all of the states in which any property at the time subject to the lien of the Mortgage shall be situated; and

WHEREAS the Company now desires to create a new series of bonds and (pursuant to the provisions of Section 120 of the Mortgage) to add to its covenants and agreements contained in the Mortgage, as heretofore supplemented, certain other covenants and agreements to be observed by it and to alter and amend in certain respects the covenants and provisions contained in the Mortgage, as heretofore supplemented and amended; and

WHEREAS the execution and delivery by the Company of this Ninth Supplemental Indenture, and the terms of the bonds of the Tenth Series hereinafter referred to, have been duly authorized by the Board of Directors of the Company by appropriate resolutions of said Board of Directors;

NOW, THEREFORE, THIS INDENTURE WITNESSETH:

That the undersigned J. C. Kennedy hereby gives written notice to the Company that he hereby resigns as Co-Trustee under the Mortgage, such resignation to take effect at the close of business on April 27, 1971, unless previously a successor Co-Trustee shall have been appointed as provided in the Mortgage, in which event such resignation shall take effect immediately on the appointment of such successor Co-Trustee.

That, pursuant to Section 102 of the Mortgage, and by order of its Board of Directors, the undersigned Northwest Natural Gas Company hereby appoints Stanley Burg as successor Co-Trustee under the Mortgage, subject to the conditions in Article XVII thereof expressed, effective at the close of business on April 27, 1971.

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That the undersigned Stanley Burg, a citizen of the United States of America, hereby accepts his said appointment by Northwest Natural Gas Company as successor Co-Trustee under the Mortgage and Deed of Trust.

That the undersigned J. C. Kennedy hereby acknowledges receipt of an executed counterpart of this instrument.

That the undersigned Northwest Natural Gas Company will proceed with the publication of the notice of resignation and notice of appointment as provided respectively in Sections 101 and 102 of the Mortgage and Deed of Trust, in substantially the forms provided in Exhibit A hereto annexed.

That Northwest Natural Gas Company, in consideration of the premises and of One Dollar to it duly paid by the Trustees at or before the sealing and delivery of these presents, the receipt whereof is hereby acknowledged, and in further assurance of the estate, title and rights of the Trustees, and in order further to secure the payment both of the principal of and interest and premium, if any, on the bonds from time to time issued under the Mortgage, according to their tenor and effect, and the performance of all the provisions of the Mortgage (including any instruments supplemental thereto and any modification made as in the Mortgage provided) and of said bonds, hereby grants, bargains, sells, releases, conveys, assigns, transfers, mortgages, pledges, sets over and confirms (subject, however, to Excepted Encumbrances, as defined in Section 6 of the Mortgage) unto J. C. Kennedy (successor to R. G. Page, as Co-Trustee) who is hereby resigning as Co-Trustee effective at the close of business on April 27, 1971 and, effective at the close of business on April 27, 1971, to Stanley Burg (then successor to R. G. Page and J. C. Kennedy) and (to the extent of its legal capacity to hold the same for the purposes hereof) to Bankers Trust Company, as Trustees under the Mortgage, and to their successor or successors in said trust, and to said Trustees and their successors and assigns forever, all property, real, personal and mixed, acquired by the Company after the date of the Mortgage, of the kind or nature specifically mentioned in Article XXI of the Mortgage or of any other kind or nature (except any herein or in the Mortgage expressly excepted) now owned or, subject to the provisions of subsection (I) of Section 87 of the Mortgage, hereafter acquired by the Company (by purchase, consolidation, merger, donation, construction, erection or in any other way) and wheresoever situated, including (without in anywise limiting or impairing by the enumeration of the same the scope and intent of the foregoing) all lands, gas plants, by-product plants, gas holders, gas mains and pipes;

all power sites, water rights, reservoirs, canals, raceways, dams, aqueducts, and all other rights or means for appropriating, conveying, storing and supplying water; all rights of way and roads; all plants for the generation of electricity by steam, water and/or other power; all power houses, street lighting systems, standards and other equipment incidental thereto, telephone, radio, television and air-conditioning systems and equipment incidental thereto, water works, water systems, steam heat and hot water plants, substations, lines, service and supply systems, bridges, culverts, tracts, ice or refrigeration plants and equipment, offices, buildings and other structures and the equipment thereof; all machinery, engines, boilers, dynamos, gas, electric and other machines, regulators, meters, transformers, generators, motors, gas, electrical and mechanical appliances, conduits, cables, gas, water, steam heat or other pipes, service pipes, fittings, valves and connections, pole and transmission lines, wires, cables, tools, implements, apparatus, furniture and chattels; all franchises, consents or permits; all lines for the transmission and distribution of gas, electric current, steam heat or water for any purpose including mains, pipes, conduits, towers, poles, wires, cables, ducts and all apparatus for use in connection therewith; all real estate, lands, easements, servitudes, licenses, permits, franchises, privileges, rights of way and other rights in or relating to public or private property, real or personal, or the occupancy of such property and (except as herein or in the Mortgage, as heretofore supplemented, expressly excepted) all right, title and interest the Company may now have or may hereafter acquire in and to any and all property of any kind or nature wheresoever situated.

TOGETHER WITH all and singular the tenements, hereditaments, prescriptions, servitudes and appurtenances belonging or in anywise appertaining to the aforementioned property or any part thereof, with the reversion and reversions, remainder and remainders and (subject to the provisions of Section 57 of the Mortgage) the tolls, rents, revenues, issues, earnings, income, product and profits thereof, and all the estate, right, title and interest and claim whatsoever, at law as well as in equity, which the Company now has or may hereafter acquire in and to the aforementioned property and franchises and every part and parcel thereof.

IT IS HEREBY AGREED by the Company that, subject to the provisions of subsection (I) of Section 87 of the Mortgage, all the property, rights, and franchises acquired by the Company (by purchase, consolidation, merger, donation, construction, erection or in any other way) after the date hereof, except any herein or in the Mortgage, as heretofore supplemented, expressly

excepted, shall be and are as fully granted and conveyed hereby and by the Mortgage, and as fully embraced within the lien hereof and the lien of the Mortgage, as supplemented, as if such property, rights and franchises were now owned by the Company and were specifically described herein or in the Mortgage, as heretofore supplemented, and conveyed hereby or thereby.

Provided that the following are not and are not intended to be now or hereafter granted, bargained, sold, released, conveyed, assigned, transferred, mortgaged, pledged, set over or confirmed hereunder and are hereby expressly excepted from the lien and operation of this Ninth Supplemental Indenture and from the lien and operation of the Mortgage, as heretofore supplemented, viz: (1) cash, shares of stock, bonds, notes and other obligations and other securities not hereafter specifically pledged, paid, deposited, delivered or held under the Mortgage, as heretofore supplemented, or covenanted so to be; (2) merchandise, equipment, apparatus, materials or supplies held for the purpose of sale or other disposition in the usual course of business; fuel, oil and similar materials and supplies consumable in the operation of any of the properties of the Company; all aircraft, tractors, rolling stock, trolley coaches, buses, motor coaches, automobiles, motor trucks, and other vehicles and materials and supplies held for the purpose of repairing or replacing (in whole or part) any of the same; (3) bills, notes and accounts receivable, judgments, demands and choses in action, and all contracts, leases and operating agreements not specifically pledged under the Mortgage, as heretofore supplemented, or covenanted so to be; (4) the last day of the term of any lease or leasehold which may be or become subject to the lien of the Mortgage; (5) gas, petroleum, carbon, chemicals, light oils, tar products, electric energy, steam, water, ice, and other materials or products, manufactured, stored, generated, produced, purchased or acquired by the Company for sale, distribution or use in the ordinary course of its business; all timber, minerals, mineral rights and royalties and all Natural Gas and Oil Production Property, as defined in Section 4 of the Mortgage; and (6) the Company's franchise to be a corporation; provided, however, that the property and rights expressly excepted from the lien and operation of this Ninth Supplemental Indenture and from the lien and operation of the Mortgage, as heretofore supplemented, in the above subdivisions (2) and (3) shall (to the extent permitted by law) cease to be so excepted in the event and as of the date that either or both of the Trustees or a receiver or trustee shall enter upon and take possession of the Mortgaged and Pledged Property in the manner provided in Article XIII of the Mortgage by reason of the occurrence of a Default as defined in Section 65 thereof.

TO HAVE AND TO HOLD all such properties, real, personal and mixed, granted, bargained, sold, released, conveyed, assigned, transferred, mortgaged, pledged, set over or confirmed by the Company as aforesaid, or intended so to be, unto J. C. Kennedy who is hereby resigning as Co-Trustee effective at the close of business on April 27, 1971, and, effective at the close of business on April 27, 1971, to Stanley Burg (then successor to J. C. Kennedy) and (to the extent of its legal capacity to hold the same for the purposes hereof) to Bankers Trust Company, as Trustees, and their successors and assigns forever.

IN TRUST NEVERTHELESS, for the same purposes and upon the same terms, trusts and conditions and subject to and with the same provisos and covenants as are set forth in the Mortgage, as heretofore supplemented, this Ninth Supplemental Indenture being supplemental thereto.

AND IT IS HEREBY COVENANTED by the Company that all the terms, conditions, provisos, covenants and provisions contained in the Mortgage, as heretofore supplemented, shall affect and apply to the property hereinbefore described and conveyed, and to the estates, rights, obligations and duties of the Company and the Trustees and the beneficiaries of the trust with respect to said property, and to the Trustees and their successors in the trust, in the same manner and with the same effect as if the said property had been owned by the Company at the time of the execution of the Mortgage, and had been specifically and at length described in and conveyed to said Trustees by the Mortgage as a part of the property therein stated to be conveyed.

The Company further covenants and agrees to and with the Trustees and their successors in said trust under the Mortgage, as follows:

ARTICLE I.

Tenth Series of Bonds.

SECTION 1. There shall be a series of bonds designated "8 $\frac{5}{8}$ % Series due 1996" (herein sometimes referred to as the "Tenth Series"), each of which shall also bear the descriptive title First Mortgage Bond, and the form thereof, which shall be established by Resolution of the Board of Directors of the Company, shall contain suitable provisions with respect to the matters hereinafter in this Section specified. Bonds of the Tenth Series shall be limited to \$18,000,000 in aggregate principal amount at any one time Outstanding

except as provided in Section 16 of the Mortgage and shall mature on April 1, 1996, and shall be issued as fully registered bonds in denominations of One Thousand Dollars and, at the option of the Company, in any multiple or multiples of One Thousand Dollars (the exercise of such option to be evidenced by the execution and delivery thereof); they shall bear interest at the rate of eight and five-eighths per centum (8 $\frac{5}{8}$ %) per annum, payable semi-annually on October 1 and April 1 of each year; and the principal of and interest on each said bond shall be payable at the office or agency of the Company in the Borough of Manhattan, The City of New York, in such coin or currency of the United States of America as at the time of payment is legal tender for public and private debts. Bonds of the Tenth Series shall be dated as in Section 10 of the Mortgage provided.

(I) Bonds of the Tenth Series shall be redeemable either at the option of the Company or pursuant to the requirements of the Mortgage in whole at any time, or in part from time to time, prior to maturity, upon notice, as provided in Section 52 of the Mortgage, mailed at least thirty (30) days prior to the date fixed for redemption, at the following general redemption prices, expressed in percentages of the principal amount of the bonds to be redeemed:

GENERAL REDEMPTION PRICES

If redeemed during the eight year period ending March 31, 1979, 108.63%.

If redeemed during the 12 months period ending March 31,

1980	105.75%	1989	102.52%
1981	105.40%	1990	102.16%
1982	105.04%	1991	101.80%
1983	104.68%	1992	101.44%
1984	104.32%	1993	101.08%
1985	103.96%	1994	100.72%
1986	103.60%	1995	100.36%
1987	103.24%	1996	100.00%
1988	102.88%		

in each case, together with accrued interest to the date fixed for redemption; provided, however, that no bonds of the Tenth Series may be redeemed pursuant to this subdivision (I) prior to April 1, 1976 as part of any

refunding operation involving, directly or indirectly, the incurring of indebtedness by the Company having a cost (calculated in accordance with acceptable financial practice) lower than 8% per annum.

(II) Bonds of the Tenth Series shall also be redeemable in whole at any time, or in part from time to time, prior to maturity, upon like notice, by the application (either at the option of the Company or pursuant to the requirements of the Mortgage) of cash deposited with the Corporate Trustee pursuant to the provisions of Section 39 or Section 64 of the Mortgage or of Section 2 hereof or with the Proceeds of Released Property; provided, however, that in the case of application of cash deposited with the Corporate Trustee pursuant to the provisions of Section 2 hereof, if the date fixed for such redemption shall be prior to January 1 of the calendar year in which such deposit of cash shall become due under the provisions of Section 2 hereof, they shall be redeemable at the general redemption prices set forth in subdivision (I) of this Section, together with accrued interest to the date fixed for redemption; and provided further, that

(1) in the case of application of cash deposited with the Corporate Trustee pursuant to the provisions of Section 2 hereof if the date fixed for such redemption shall be on or after January 1 of the calendar year in which such deposit of cash shall become due in accordance with the Total Sinking Fund Requirement for said calendar year, or

(2) in the case of redemption by the application of cash deposited with the Corporate Trustee pursuant to the provisions of Section 39 or Section 64 of the Mortgage or with the Proceeds of Released Property,

they shall be redeemable at the following special redemption prices, expressed in percentages of the principal amount of the bonds to be redeemed:

SPECIAL REDEMPTION PRICES

If redeemed during the 12 months period ending March 31,

1972	100.00%	1977	100.00%
1973	100.00%	1978	100.00%
1974	100.00%	1979	100.00%
1975	100.00%	1980	100.00%
1976	100.00%	1981	100.00%

1982	100.00%	1990	100.00%
1983	100.00%	1991	100.00%
1984	100.00%	1992	100.00%
1985	100.00%	1993	100.00%
1986	100.00%	1994	100.00%
1987	100.00%	1995	100.00%
1988	100.00%	1996	100.00%
1989	100.00%		

in each case, together with accrued interest to the date fixed for redemption.

(III) At the option of the registered owner, any bonds of the Tenth Series, upon surrender thereof, for cancellation, at the office or agency of the Company in the Borough of Manhattan, The City of New York, shall (subject to the provisions of Section 12 of the Mortgage) be exchangeable for a like aggregate principal amount of bonds of the same series of other authorized denominations.

Transfers of bonds of the Tenth Series may be registered (subject to the provisions of Section 12 of the Mortgage) at the office or agency of the Company in the Borough of Manhattan, the City of New York.

Upon any registration of transfer or exchange of bonds of the Tenth Series, the Company may make a charge therefor sufficient to reimburse it for any tax or taxes or other governmental charge, as provided in Section 12 of the Mortgage, but the Company hereby waives any right to make a charge in addition thereto for any registration or exchange or transfer of bonds of the Tenth Series.

ARTICLE II.

Sinking Fund for Bonds of the Tenth Series.

SECTION 2. The Company covenants that, unless all bonds of the Tenth Series shall have ceased to be Outstanding, it will, as a sinking fund for the retirement of bonds of the Tenth Series, deliver to the Corporate Trustee an amount in cash and/or principal amount of bonds of the Tenth Series, on July 1 of each year, beginning with the year 1976 to and including the year 1995, equal to the Total Sinking Fund Requirement for said calendar year. The term Total Sinking Fund Requirement shall mean for any calendar year \$360,000 in cash and/or principal amount of bonds of the Tenth Series

(herein called the "mandatory sinking fund requirement") plus the Optional Sinking Fund Payment, if any, for such calendar year. The term "Optional Sinking Fund Payment" shall mean, for any calendar year, any amount, not in excess of \$360,000 in cash and/or principal amount of bonds of the Tenth Series, that the Company elects to add to the Sinking Fund for such calendar year (herein called the "primary optional payment") provided that if the Company elects not to add any such amount pursuant to this option in any calendar year or shall add an amount less than \$360,000 (the amount by which, in any such calendar year, \$360,000 exceeds the amount so added being herein called the "reserved optional payment"), the Company shall have the right to also add all or any part of the reserved optional payment (to the extent not theretofore so added) to the primary optional payment (and to any other reserved optional payment then being made) in any of the next succeeding five calendar years. At the option of the Company, Optional Sinking Fund Payments may (at any time after they are made) be applied (to the extent not theretofore so applied) in whole or in part from time to time, to reduce mandatory sinking fund requirements for subsequent years upon written notice to the Corporate Trustee.

The Company, at its option (as evidenced by a written order of its Treasurer or an Assistant Treasurer delivered to the Corporate Trustee directing such credit), shall be credited against any of the requirements of this Section with the aggregate principal amount of any bond(s) of the Tenth Series (a) which are not then being and have not theretofore been delivered to meet the requirements of this Section, (b) which have been purchased or redeemed and canceled or for the purchase or redemption of which moneys in the necessary amount shall be held by the Corporate Trustee with irrevocable direction so to apply the same (provided that any such purchase or redemption shall have been, or is to be, effected otherwise than with cash deposited under the provisions of Section 64 of the Mortgage or with cash which, after giving effect to the provisions of Section 61 of the Mortgage, is then deemed to be or to have been Funded Cash, and, in the case of redemption, the notice required therefor shall have been given or have been provided for to the satisfaction of the Corporate Trustee) and (c) which have not theretofore been made the basis under any of the provisions of the Mortgage for the authentication and delivery of bonds, the withdrawal of cash or the release of property or the basis of a credit under the provisions of this Section (subject to the provisions of Sections 59 and 61 of the Mortgage, permitting the revocation of the waiver of the right to the authentication and delivery of bonds).

Except as hereinafter specifically prohibited by this paragraph, and notwithstanding any other provisions of this Ninth Supplemental Indenture, (i) the Company shall be permitted from time to time to anticipate in whole or in part the Total Sinking Fund Requirement becoming due on July 1 of the then current year or the mandatory sinking fund requirement becoming due on July 1 of any subsequent year or years, by depositing cash and/or a principal amount of bonds of the Tenth Series with the Corporate Trustee in full satisfaction or in partial satisfaction of the requirements of this Section, and (ii) any cash deposited under this Section, whether in full satisfaction or in partial satisfaction of the requirements of this Section and whether becoming due on July 1 of the then current year or of a subsequent year, shall be applied by the Corporate Trustee from time to time, as the Company may request, to the purchase of bonds of the Tenth Series, at public or private sale, provided, however, that the Corporate Trustee, before making any purchases of bonds as so provided shall by mail notify all registered owners of bonds of the Tenth Series of the amount of cash to be applied to the purchase of such bonds and request tenders of bonds by a specified date, and on or after such date the Corporate Trustee, to the extent, as nearly as is possible, of the cash so to be applied, shall purchase the bonds so tendered at the price or prices (including accrued interest and brokerage, if any) most favorable to the Company but not exceeding the cost of redeeming such bonds on a date forty (40) days after the date of such purchase (including premium, if any, and accrued interest from the interest date next preceding the date of purchase to such redemption date in such cost), and, if more bonds are offered at any specified price than there is cash then available to purchase the same, the Corporate Trustee shall prorate its purchases of bonds at such price as nearly as may be practicable between the owners of bonds offered at such price in proportion to the principal amounts of bonds of the Tenth Series registered in the names of the owners offering bonds at such price, or to the redemption of bonds of the Tenth Series; provided, however, that if moneys in excess of the sum of Fifty Thousand Dollars (\$50,000) deposited with the Corporate Trustee pursuant to this Section (except moneys which theretofore have been set aside to be applied to the purchase of bonds so tendered or to the redemption of bonds called for redemption) shall have remained on deposit for a period of six calendar months, such moneys so remaining on deposit shall promptly thereafter be applied by the Corporate Trustee to the redemption of bonds of the Tenth Series; and provided further that, unless consented to by the holders of a majority in principal amount of bonds of the Tenth Series Outstanding at the time of such consent, the Company may not deposit cash prior to April 1, 1976 in anticipation of the requirements of this Section, if the cash so

deposited represents a part of a refunding operation involving, directly or indirectly, the incurring of indebtedness by the Company having a cost (calculated in accordance with acceptable financial practice) lower than 8 $\frac{5}{8}$ % per annum.

For all purposes of the Mortgage (including all calculations thereunder), so long as any bonds of the Tenth Series remain Outstanding, as defined in Section 2 of the Mortgage:

(I) any cash deposited under the provisions of this Section shall be deemed to be Funded Cash;

(II) any bonds of the Tenth Series delivered to the Corporate Trustee pursuant to the provisions of this Section shall, after such delivery, be deemed to have been retired by the use of Funded Cash; and

(III) with respect to all credits taken under this Section on the basis of the purchase or redemption of bonds of the Tenth Series, it shall be deemed that a credit has been taken under the Mortgage on the basis thereof.

Any bonds issued under the Mortgage, delivered to, deposited with or purchased or redeemed by, the Corporate Trustee pursuant to the provisions of this Section, shall forthwith be canceled by the Corporate Trustee.

The Company shall forthwith from time to time on demand of the Corporate Trustee make further payments pursuant to the provisions of this Section on account of accrued interest, brokerage and premium, if any, on bonds of the Tenth Series purchased or redeemed or then to be purchased or redeemed but not in excess of

(AA) the aggregate cost for principal, interest, brokerage and premium, if any, on all bonds theretofore, or then to be, purchased and/or redeemed pursuant to the provisions of this Section

after deducting therefrom

(BB) the aggregate principal amount of all bonds theretofore, and of all bonds then to be, purchased and/or redeemed pursuant to the provisions of this Section plus the aggregate of all such further payments theretofore made pursuant to the provisions of this Section on account of accrued interest, brokerage and/or premium, if any.

SECTION 3. Section 14 of the Mortgage is hereby amended to read as follows:

"SECTION 14. All bonds authenticated and delivered hereunder shall, from time to time, be executed on behalf of the Company by its President or one of its Vice-Presidents whose signature, except on bonds of the 3½% Series due 1976 and 3¾% Series due 1974, may be facsimile and its corporate seal shall be thereon impressed or imprinted and attested by its Secretary or one of its Assistant Secretaries, whose signature, except on bonds of the 3½% Series due 1976, 3¾% Series due 1974, 4¾% Series due 1976, 5½% Series due 1984, 5½% Series due 1986, 4¾% Series due 1989, 5¾% Series due 1991 and 9¾% Series due 1974, may also be facsimile. The coupons to be attached to coupon bonds shall bear the facsimile signature of the present or any future Treasurer of the Company. In case any of the officers who shall have signed any bonds or attested the seal thereon, or whose facsimile signature appears on any bond or coupon, shall cease to be such officers of the Company before the bonds so signed and/or sealed shall have been actually authenticated and delivered by the Corporate Trustee or issued by the Company, such bonds nevertheless may be authenticated, delivered and/or issued with the same force and effect as though the person or persons who signed such bonds and/or attested the seal thereon and/or whose facsimile signature appears on any bond or coupon had not ceased to be such officer or officers of the Company. Before authenticating any coupon bonds, the Corporate Trustee shall cut off and cancel all matured coupons thereto attached (except as otherwise provided or permitted in Sections 12 and 16 hereof)."

ARTICLE III.

Miscellaneous Provisions.

SECTION 4. Subject to the amendments provided for in this Ninth Supplemental Indenture, the terms defined in the Mortgage, as heretofore supplemented, shall, for all purposes of this Ninth Supplemental Indenture, have the meanings specified in the Mortgage, as heretofore supplemented.

SECTION 5. Section 55 of the Mortgage, as amended, is hereby further amended by inserting the words "and subject to the provisions of Section 2

of the Ninth Supplemental Indenture dated as of April 1, 1971," after the words "March 1, 1966".

SECTION 6. The Company reserves the right, without any consent or other action by holders of bonds of the Tenth Series or of any subsequently created series, to amend Article XIX of the Mortgage, as supplemented, to read as follows:

"ARTICLE XIX.

"MEETINGS AND CONSENTS OF BONDHOLDERS.

"SECTION 107. Modifications and alterations of this Indenture and/or of any indenture supplemental hereto and/or of the rights and obligations of the Company and/or of the rights of the holders of bonds and coupons issued hereunder may be made as provided in this Article XIX.

"SECTION 108. The Corporate Trustee may at any time call a meeting of the bondholders entitled to vote on the matters to be considered at such meeting and it shall call such a meeting on written request of the holders of not less than a majority in principal amount of the bonds Outstanding hereunder (determined as provided in Section 71 hereof) at the time of such request. The Company, pursuant to a Resolution of its Board of Directors, may also call a meeting of the bondholders at any time. In each case the purpose or purposes of such meeting shall be set forth in reasonable detail. In the event of the Corporate Trustee's failing for ten (10) days to call a meeting after being thereunto requested by the bondholders as above set forth, holders of Outstanding bonds in the amount above specified in this Section or the Company, pursuant to Resolution of its Board of Directors, may call such meeting. Every such meeting called by and at the instance of the Corporate Trustee shall be held in the Borough of Manhattan, The City of New York, or with the written approval of the Company, at any other place in the United States of America, and written notice thereof, stating the place and time thereof and in general terms the business to be submitted, shall be mailed by the Corporate Trustee not less than thirty (30) days before such meeting (a) to all holders of bonds the names and addresses of whom are then preserved as required by Section 43 hereof, and (b) to the Company

addressed to it at 735 S. W. Morrison Street, Portland, Oregon (or at such other address as may be designated by the Company from time to time), and, unless all Outstanding bonds entitled to vote are fully registered or are registered as to principal, shall be published by the Corporate Trustee once on at least four different days preceding the meeting, in a Daily Newspaper, printed in the English language, and of general circulation in the Borough of Manhattan, The City of New York, the first publication to be not less than twenty (20) days prior to the date of such meeting; provided, however, that, if notice is given by publication as aforesaid, then the mailing of such notice to any bondholder shall in no case be a condition precedent to the validity of any action taken at such meeting. If such meeting is called by or at the instance either of the Company or of the bondholders, it shall be held at such place in the United States of America as may be specified in the notice calling such meeting and notice thereof shall be sufficient for all purposes hereof if given by newspaper publication as aforesaid stating the place and time of the meeting and in general terms the business to be submitted. Any meeting of bondholders shall be valid without notice if the holders of all bonds then Outstanding hereunder are present in person or by proxy and if the Company and the Corporate Trustee are present by duly authorized representatives, or if notice is waived in writing before or after the meeting by the Company, the holders of all bonds Outstanding hereunder and by the Corporate Trustee, or by such of them as are not present in person or by proxy.

"SECTION 109. Officers and nominees of the Corporate Trustee and of the Company and of the Co-Trustee or their or its nominees may attend such meeting, but shall not as such be entitled to vote thereat. Attendance by bondholders may be in person or by proxy. In order that the holder of any bond payable to bearer and his proxy may attend and vote without producing his bond, the Corporate Trustee, with respect to any such meeting, may make and from time to time vary such regulations as it shall think fit for deposit of bonds with, (i) any bank, or trust or insurance company, or (ii) any trustee, secretary, administrator or other proper officer of any pension, welfare, hospitalization, or similar fund or funds, or (iii) the United States of America, any Territory thereof, the District of Columbia, any State of the United

States, any municipality in any State or Territory of the United States or any public instrumentality of the United States, any State or Territory, or (iv) any other person or corporation satisfactory to the Corporate Trustee, and for the issue to the persons depositing the same of certificates by such depositaries entitling the holders thereof to be present and vote at any such meeting and to appoint proxies to represent them and vote for them at any such meeting in the same way as if the persons so present and voting, either personally or by proxy, were the actual bearers of the bonds in respect of which such certificates shall have been issued and any regulations so made shall be binding and effective. A bondholder in any of the foregoing categories may sign such a certificate in his own behalf. In lieu of or in addition to providing for such deposit, the Corporate Trustee may, in its discretion, permit such institutions to issue certificates stating that bonds were exhibited to them, which certificates shall entitle the holders thereof to vote at any meeting only if the bonds with respect to which they are issued are not produced at the meeting by any other person and are not at the time of the meeting registered in the name of any other person. Each such certificate shall state the date on which the bond or bonds in respect of which such certificate shall have been issued were deposited with or exhibited to such institution and the series, maturities and serial numbers of such bonds. A bondholder in any of the foregoing categories may sign such a certificate in his own behalf. In the event that two or more such certificates shall be issued with respect to any bond or bonds, the certificate bearing the latest date shall be recognized and be deemed to supersede any certificate or certificates previously issued with respect to such bond or bonds. If any such meeting shall have been called, under the provisions of Section 108 hereof, by bondholders or by the Company, regulations to like effect for such deposit or exhibition of bonds and the issue of certificates by (i) any bank or trust or insurance company, or (ii) any trustee, secretary, administrator or other proper officer of any pension, welfare, hospitalization, or similar fund or funds, or (iii) by the United States of America, any Territory thereof, the District of Columbia, any State of the United States, any municipality in any State or Territory of the United States or any public instrumentality of the United States, any State or Territory shall be similarly binding and effective for all purposes hereof if adopted or approved by the bondholders calling such meeting or by the Board of Directors of the Company, if such meeting

shall have been called by the Company, provided that in either such case copies of such regulations shall be filed with the Corporate Trustee. A bondholder in any of the foregoing categories may sign such a certificate in his own behalf.

"SECTION 110. Subject to the restrictions specified in Sections 109 and 113 hereof, any registered holder of bonds Outstanding hereunder and any holder of a certificate (not superseded) provided for in Section 109 hereof, shall be entitled in person or by proxy to attend and vote at such meeting as holder of the bonds registered or certified in the name of such holder without producing such bonds. All others seeking to attend or vote at such meeting in person or by proxy must, if required by any authorized representative of the Corporate Trustee or the Company or by any other bondholder, produce the bonds claimed to be owned or represented at such meeting, and everyone seeking to attend or vote shall, if required as aforesaid, produce such further proof of bond ownership or personal identity as shall be satisfactory to the authorized representative of the Corporate Trustee, or if none be present then to the Inspectors of Votes hereinafter provided for. Proxies shall be witnessed or in the alternative may (a) have the signature guaranteed by a bank or trust company or a registered dealer in securities, (b) be acknowledged before a Notary Public or other officer authorized to take acknowledgments, or (c) have their genuineness otherwise established to the satisfaction of the Inspectors of Votes. All proxies and certificates presented at any meeting shall be delivered to said Inspectors of Votes and filed with the Corporate Trustee.

"SECTION 111. Persons nominated by the Corporate Trustee, if it is represented at the meeting, shall act as temporary Chairman and Secretary, respectively, of the meeting, but if the Corporate Trustee shall not be represented or shall fail to nominate such persons or if any person so nominated shall not be present, the bondholders and proxies present shall by a majority vote, irrespective of the amount of their holdings, elect another person or other persons from those present to act as temporary Chairman and/or Secretary. A permanent Chairman and a permanent Secretary of such meeting shall be elected from those present by the bondholders and proxies present by a majority vote of bonds repre-

sented. The Corporate Trustee, if represented at the meeting, shall appoint two Inspectors of Votes who shall decide as to the right of anyone to vote and shall count all votes cast at such meeting, except votes on the election of a Chairman and Secretary, both temporary and permanent, as aforesaid, and who shall make and file with the permanent Secretary of the meeting their verified written report in duplicate of all such votes so cast at said meeting. If the Corporate Trustee shall not be represented at the meeting or shall fail to nominate such Inspectors of Votes or if either Inspector of Votes fails to attend the meeting, the vacancy shall be filled by appointment by the permanent Chairman of the meeting.

"SECTION 112. The holders of not less than sixty-six and two-thirds per centum ($66\frac{2}{3}\%$) in principal amount of the bonds Outstanding hereunder when such meeting is held must be present at such meeting in person or by proxy in order to constitute a quorum for the transaction of business, less than a quorum, however, having power to adjourn.

"SECTION 113. Subject to the provisions of Sections 71 and 80 hereof, any modification or alteration of this Indenture and/or of any indenture supplemental thereto and/or of the rights and obligations of the Company and/or the rights of the holders of bonds and/or coupons issued hereunder in any particular, may be made at a meeting of bondholders duly convened and held in accordance with the provisions of this Article, but only by resolution duly adopted by the affirmative vote of the holders of sixty-six and two-thirds per centum ($66\frac{2}{3}\%$) or more in principal amount of the bonds Outstanding hereunder, and, if the rights of one or more, but less than all, series of bonds then Outstanding are to be affected by action taken at such meeting, then also by affirmative vote of the holders of at least sixty-six and two-thirds per centum ($66\frac{2}{3}\%$) in principal amount of each series of bonds so to be affected and Outstanding hereunder, when such meeting is held, and in every case approved by Resolution of the Board of Directors of the Company as hereinafter specified; provided, however, that no such modification or alteration shall, without the consent of the holder of any bond issued hereunder affected thereby, (1) impair or affect the right of such holder to receive payment of the principal of (and premium, if any) and interest on such bond, on or after the respective due dates expressed in such bond, or to institute suit for the enforcement of any such payment

on or after such respective dates, or (2) permit the creation of any lien ranking prior to, or on a parity with, the Lien of this Indenture with respect to any of the Mortgaged and Pledged Property, or (3) permit the deprivation of any non-assenting bondholder of a lien upon the Mortgaged and Pledged Property for the security of his bonds (subject only to the lien of taxes, assessments or governmental charges not then delinquent and to any mortgage or other liens existing upon such property which are prior hereto at the date of the calling of any such bondholders' meeting), or (4) permit the reduction of the percentage required by the provisions of this Section for the taking of any action under this Section with respect to any bond Outstanding hereunder. For all purposes of this Article, the Trustees, subject to the provisions of Sections 88 and 89 hereof, shall be entitled to rely upon an Opinion of Counsel with respect to the extent, if any, as to which any action taken at such meeting affects the rights under this Indenture or under any indenture supplemental hereto of any holders of bonds then Outstanding hereunder.

"Except for the purpose of waiving any past Default, as defined in Section 65 hereof, of the Company and the consequences thereof, in which event the provisions of Section 71 hereof shall be applicable, bonds owned and/or held by and/or for account of and/or for the benefit or interest of the Company, or any corporation of which the Company shall own twenty-five per centum (25%) or more of the outstanding voting stock, shall not be deemed Outstanding for the purpose of any vote or of any calculation of bonds Outstanding in this Article XIX provided for, except that, subject to the provisions of Sections 88 and 89 hereof, for the purpose of determining whether the Trustees, or either of them, shall be protected in relying on any such vote or calculation, only bonds which the Trustees, or either of them, know are so owned and/or held, shall be excluded.

"SECTION 114. A record in duplicate of the proceedings of each meeting of bondholders shall be prepared by the permanent Secretary of the meeting and shall have attached thereto the original reports of the Inspectors of Votes, and affidavits by one or more persons having knowledge of the facts showing a copy of the notice of the meeting, and showing that said notice was mailed and published as provided

in Section 108 hereof. Such record shall be signed and verified by the affidavits of the permanent Chairman and the permanent Secretary of the meeting, and one duplicate thereof shall be delivered to the Company and the other to the Corporate Trustee for preservation by the Corporate Trustee. Any record so signed and verified shall be proof of the matters therein stated, and if such record shall also be signed and verified by the affidavit of a duly authorized representative of the Corporate Trustee, such meeting shall be deemed conclusively to have been duly convened and held and such record shall be conclusive, and any resolution or proceeding stated in such record to have been adopted or taken, shall be deemed conclusively to have been duly adopted or taken by such meeting. A true copy of any resolution adopted by such meeting shall be mailed by the Corporate Trustee to all holders of bonds Outstanding hereunder, the names and addresses of whom are then preserved by the Corporate Trustee pursuant to the provisions of Section 43 hereof, and proof of such mailing by the affidavit of some person having knowledge of the fact shall be filed with the Corporate Trustee, but failure to mail copies of such resolution as aforesaid shall not affect the validity thereof. No such resolution shall be binding until and unless such resolution is approved by Resolution of the Board of Directors of the Company, and it shall be the duty of the Company to file a copy of such Resolution of approval, if any, certified by the Secretary or an Assistant Secretary of the Company with the Corporate Trustee, but if such Resolution of the Board of Directors of the Company is adopted and a certified copy thereof is filed with the Corporate Trustee, the resolution so adopted by such meeting shall (to the extent permitted by law) be deemed conclusively to be binding upon the Company, the Trustees and the holders of all bonds and coupons issued hereunder, at the expiration of sixty (60) days after such filing, except in the event of a final decree of a court of competent jurisdiction setting aside such resolution, or annulling the action taken thereby in a legal action or equitable proceeding for such purposes commenced within such sixty (60) day period; provided, however, that no such resolution of the bondholders, or Resolution of the Company, shall in any manner change or modify or be so construed as to change or modify any of the rights, immunities, or obligations of the Trustees or either of them without their, its or his written assent thereto.

"SECTION 115. Bonds authenticated and delivered after the date of any bondholders' meeting may bear a notation in form approved by the Corporate Trustee as to the action taken at meetings of bondholders theretofore held, and upon demand of the holder of any bond Outstanding at the date of any such meeting and presentation of his bond for the purpose at the principal office of the Corporate Trustee, the Company shall cause suitable notation to be made on such bond by endorsement or otherwise as to any action taken at any meeting of bondholders theretofore held. If the Company or the Corporate Trustee shall so determine, new bonds so modified as in the opinion of the Corporate Trustee and the Board of Directors of the Company to conform to such bondholders' resolution shall be prepared, authenticated and delivered, and upon demand of the holder of any bond then Outstanding and affected thereby shall be exchanged without cost to such bondholder for bonds then Outstanding hereunder upon surrender of such bonds with all unmaturing coupons, if any, appertaining thereto. The Company or the Corporate Trustee may require bonds Outstanding to be presented for notation or exchange as aforesaid if either shall see fit to do so. Instruments supplemental to this Indenture embodying any modification or alteration of this Indenture or of any indenture supplemental hereto made at any bondholders' meeting, and approved by Resolution of the Board of Directors of the Company, as aforesaid, may be executed by the Trustees and the Company and upon demand of the Corporate Trustee, or if so specified in any resolution adopted by any such bondholders' meeting, shall be executed by the Company and the Trustees.

"Any instrument supplemental to this Indenture executed pursuant to the provisions of this Section, shall comply with all applicable provisions of the Trust Indenture Act of 1939 as in force on the date of the execution of such supplemental indenture.

"SECTION 116. (A) Anything in this Article contained to the contrary notwithstanding, the Corporate Trustee shall receive the written consent (in any number of instruments of similar tenor executed by bondholders or by their attorneys appointed in writing) of the holders of sixty-six and two-thirds per centum (66 $\frac{2}{3}$ %) or more in principal amount of the bonds Outstanding hereunder, and, if the rights of one or more, but less than all, series of bonds then Outstanding are to be affected by action taken pursuant to such consent, then also the written

consent of the holders of at least sixty-six and two-thirds per centum (66 $\frac{2}{3}$ %) in principal amount of each series of bonds so to be affected and Outstanding hereunder (at the time the last such needed consent is delivered to the Corporate Trustee) in lieu of the holding of a meeting pursuant to this Article and in lieu of all action at such a meeting and with the same force and effect as a resolution duly adopted in accordance with the provisions of Section 113 hereof.

“(B) Instruments of consent shall be witnessed or in the alternative may (a) have the signature guaranteed by a bank or trust company or a registered dealer in securities, (b) be acknowledged before a Notary Public or other officer authorized to take acknowledgments, or (c) have their genuineness otherwise established to the satisfaction of the Corporate Trustee.

“The amount of bonds payable to bearer, and the series and serial numbers thereof, held by a person executing an instrument of consent (or whose attorney has executed an instrument of consent in his behalf), and the date of his holding the same, may be proved either by exhibiting the bonds themselves to the Corporate Trustee or by a certificate executed (i) by any bank or trust or insurance company, (ii) by any trustee, secretary, administrator or other proper officer of any pension, welfare, hospitalization or similar fund, (iii) by the United States of America, any Territory thereof, the District of Columbia, any State of the United States, any municipality in any State or Territory of the United States or any public instrumentality of the United States, any State or Territory, or (iv) by any other person or corporation satisfactory to the Corporate Trustee. A bondholder in any of the foregoing categories may sign a certificate in his own behalf.

“Each such certificate shall be dated and shall state in effect that as of the date thereof a coupon bond or bonds of a specified series and bearing a specified serial number or numbers was deposited with or exhibited to the signer of such certificate. The holding by the person named in any such certificate of any bond specified therein shall be presumed to continue unless (1) any certificate bearing a later date issued in respect of the same bond shall be produced, (2) the bond specified in such certificate (or any bond or bonds issued in exchange or substitution for such bond) shall be produced by another holder, or (3) the bond specified in such certificate shall be registered as to princi-

pal or shall have been surrendered in exchange for a fully registered bond registered in the name of another holder. The Corporate Trustee may nevertheless in its discretion require further proof in cases where it deems further proof desirable. The ownership of registered bonds shall be proved by the registry books.

“(C) Until such time as the Corporate Trustee shall receive the written consent of the necessary percentum in principal amount of the bonds required by the provisions of subsection (A) above for action contemplated by such consent, any holder of a bond, the serial number of which is shown by the evidence to be included in the bonds the holders of which have consented to such action, may, by filing written notice with the Corporate Trustee at its principal office and upon proof of holding as provided in subsection (B) above, revoke such consent so far as it concerns such bond. Except as aforesaid, any such consent shall be conclusive and binding upon such holder and upon all future holders of such bond (and any bond issued in lieu thereof or exchanged therefor), irrespective of whether or not any notation of such consent is made upon such bond, and in any event any action taken by the holders of the percentage in aggregate principal amount of the bonds specified in subsection (A) above in connection with such action shall, subject to the provisions of the last sentence of Section 114 hereof, be conclusively binding upon the Company, the Trustees and the holders of all the bonds.”

SECTION 6. The Trustees hereby accept the trusts hereby declared, provided, created or supplemented, and agree to perform the same upon the terms and conditions herein and in the Mortgage, as heretofore supplemented, set forth, including the following:

The Trustees shall not be responsible in any manner whatsoever for or in respect of the validity or sufficiency of this Ninth Supplemental Indenture or for or in respect of the recitals contained herein, all of which recitals are made by the Company solely. In general each and every term and condition contained in Article XVII of the Mortgage shall apply to and form part of this Ninth Supplemental Indenture with the same force and effect as if the same were herein set forth in full, with such omissions, variations and

insertions, if any, as may be appropriate to make the same conform to the provisions of the Ninth Supplemental Indenture.

SECTION 7. Whenever in this Ninth Supplemental Indenture any of the parties hereto is named or referred to, this shall, subject to the provisions of Articles XVI and XVII of the Mortgage, be deemed to include the successors or assigns of such party, and all the covenants and agreements in this Ninth Supplemental Indenture contained by or on behalf of the Company or by or on behalf of the Trustees shall bind and inure to the benefit of the respective successors and assigns of such parties whether so expressed or not.

SECTION 8. Nothing in this Ninth Supplemental Indenture, expressed or implied, is intended, or shall be construed, to confer upon, or to give to, any person, firm or corporation, other than the parties hereto and the holders of the bonds and coupons outstanding under the Mortgage, any right, remedy, or claim under or by reason of this Ninth Supplemental Indenture or any covenant, condition, stipulation, promise or agreement hereof, and all the covenants, conditions, stipulations, promises and agreements by or on behalf of the Company as set forth in this Ninth Supplemental Indenture shall be for the sole and exclusive benefit of the parties hereto, and of the holders of the bonds and of the coupons outstanding under the Mortgage.

SECTION 9. This Ninth Supplemental Indenture has been executed in several identical counterparts, each of which shall be an original and all of which shall constitute but one and the same instrument.

IN WITNESS WHEREOF, Northwest Natural Gas Company, party hereto of the first part, has caused its corporate name to be hereunto affixed, and this instrument to be signed and sealed by its President or one of its Vice Presidents, and its corporate seal to be attested by its Secretary or one of its Assistant Secretaries for and in its behalf on the 23rd day of April, 1971, as of April 1, 1971 in the City of Portland, Oregon; Bankers Trust Company, one of the parties hereto of the second part, has caused its corporate name to be hereunto affixed, and this instrument to be signed and sealed by one of its Vice Presidents or one of its Assistant Vice Presidents and its corporate seal to be attested by one of its Assistant Secretaries; and J. C. Kennedy, one of the parties hereto of the second part (who is resigning as Co-Trustee effective at the close of business on April 27, 1971), has hereunto set his hand and affixed his seal, and Stanley Burg, one of the parties

hereto of the second part (who is appointed as successor Co-Trustee effective at the close of business on April 27, 1971), has hereunto set his hand and affixed his seal, all in The City of New York, on the 26th day of April, 1971, as of April 1, 1971.

NORTHWEST NATURAL GAS COMPANY

[CORPORATE SEAL]

By FRANCIS F. HILL
President.

Attest:

W. E. RADFORD
Secretary.

Executed, sealed and delivered by NORTHWEST
NATURAL GAS COMPANY in the presence of:

W. A. COOK
KATHLEEN SKINNER

BANKERS TRUST COMPANY, as Trustee,

[CORPORATE SEAL]

By G. E. MAIER
Vice President.

Attest:

W. L. TISCHLER
Assistant Secretary.

J. C. KENNEDY (L.S.)
J. C. KENNEDY
STANLEY BURG (L.S.)
STANLEY BURG

Executed, sealed and delivered by BANKERS
TRUST COMPANY, J. C. KENNEDY and STANLEY
BURG in the presence of:

IRA M. BRATT
M. E. SECHEHAY, JR.

STATE OF OREGON }
COUNTY OF MULTNOMAH } ss.:

April 23rd, A. D. 1971.

Before me personally appeared FRANCIS F. HILL, who, being duly sworn, did say that he is President of NORTHWEST NATURAL GAS COMPANY and that the seal affixed to the foregoing instrument is the corporate seal of said Corporation and that said instrument was signed and sealed in behalf of said Corporation by authority of its Board of Directors; and he acknowledged said instrument to be its voluntary act and deed.

On this 23rd day of April, 1971, before me personally appeared FRANCIS F. HILL, to me known to be President of NORTHWEST NATURAL GAS COMPANY, one of the corporations that executed the within and foregoing instrument, and acknowledged said instrument to be the free and voluntary act and deed of said Corporation, for the uses and purposes therein mentioned, and on oath stated that he was authorized to execute said instrument and that the seal affixed is the corporate seal of said Corporation.

IN WITNESS WHEREOF I have hereunto set my hand and affixed my official seal the day and year first above written.

[NOTARIAL SEAL]

H. W. PIERCE
Notary Public for Oregon
My Commission Expires January 25, 1974

STATE OF NEW YORK }
COUNTY OF NEW YORK } ss.:

April 26th, A. D. 1971.

Before me personally appeared G. E. MAIER, who, being duly sworn, did say that he is a Vice President of BANKERS TRUST COMPANY and that the seal affixed to the foregoing instrument is the corporate seal of said Corporation and that said instrument was signed and sealed in behalf of said Corporation by authority of its Board of Directors; and he acknowledged said instrument to be its voluntary act and deed.

On this 26th day of April, 1971, before me personally appeared G. E. MAIER, to me known to be a Vice President of BANKERS TRUST COMPANY, one of the corporations that executed the within and foregoing instrument, and acknowledged said instrument to be the free and voluntary act and deed of said Corporation, for the uses and purposes therein mentioned, and on oath stated that he was authorized to execute said instrument and that the seal affixed is the corporate seal of said Corporation.

IN WITNESS WHEREOF I have hereunto set my hand and affixed my official seal the day and year first above written.

[NOTARIAL SEAL]

CHRISTINE GERACE
Notary Public

CHRISTINE GERACE
Notary Public, State of New York
No. 24-1407147
Qualified in Kings County
Certificate filed in New York County
Commission Expires March 30, 1973

STATE OF NEW YORK }
COUNTY OF NEW YORK } ss.:

April 26th, A. D. 1971.

Before me personally appeared the above-named J. C. KENNEDY and acknowledged the foregoing instrument to be his voluntary act and deed.

On this day personally appeared before me J. C. KENNEDY to me known to be the individual described in and who executed the within and foregoing instrument, and acknowledged that he signed the same as his free and voluntary act and deed, for the uses and purposes therein mentioned.

Given under my hand and official seal this 26th day of April, 1971.

[NOTARIAL SEAL]

CHRISTINE GERACE
Notary Public

CHRISTINE GERACE
Notary Public, State of New York
No. 24-1407147
Qualified in Kings County
Certificate filed in New York County
Commission Expires March 30, 1973

STATE OF NEW YORK }
COUNTY OF NEW YORK } ss.:

April 26th, A. D. 1971.

Before me personally appeared the above-named STANLEY BURG and acknowledged the foregoing instrument to be his voluntary act and deed.

On this day personally appeared before me STANLEY BURG to me known to be the individual described in and who executed the within and foregoing instrument, and acknowledged that he signed the same as his free and voluntary act and deed, for the uses and purposes therein mentioned.

Given under my hand and official seal this 26th day of April, 1971.

[NOTARIAL SEAL]

CHRISTINE GERACE
Notary Public

CHRISTINE GERACE
Notary Public, State of New York
No. 24-1407147
Qualified in Kings County
Certificate filed in New York County
Commission Expires March 30, 1973

STATE OF OREGON }
COUNTY OF MULTNOMAH } ss.:

FRANCIS F. HILL, being duly sworn, deposes and says that he is President of NORTHWEST NATURAL GAS COMPANY, the Mortgagor named in the foregoing instrument, and makes this affidavit for and on its behalf; that said instrument is made in good faith, and without any design to hinder, delay, or defraud creditors.

FRANCIS F. HILL

Subscribed and sworn to before me }
this 23rd day of April, 1971. }

[NOTARIAL SEAL]

H. W. PIERCE
Notary Public for Oregon

My Commission Expires January 25, 1974

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(EXHIBIT A)

NOTICE OF RESIGNATION OF CO-TRUSTEE

NOTICE IS HEREBY GIVEN that the undersigned J. C. Kennedy has resigned as successor Co-Trustee under the Mortgage and Deed of Trust dated as of July 1, 1946, as amended, of Portland Gas & Coke Company (now Northwest Natural Gas Company) to Bankers Trust Company and R. G. Page (J. C. Kennedy, successor), as Trustees, such resignation having taken effect at the close of business on April 27, 1971.

Dated, April 28, 1971.

J. C. KENNEDY

NOTICE OF APPOINTMENT OF SUCCESSOR CO-TRUSTEE

NOTICE IS HEREBY GIVEN that the undersigned Northwest Natural Gas Company has received notice of and accepted the foregoing resignation of J. C. Kennedy as Co-Trustee under its said Mortgage and Deed of Trust dated as of July 1, 1946, as amended, and that as provided in said Mortgage and Deed of Trust the undersigned has appointed Stanley Burg as successor Co-Trustee thereunder, effective at the close of business on April 27, 1971.

Dated, April 28, 1971.

NORTHWEST NATURAL GAS COMPANY

SUMMARY OF RECORDING DATA

IN THE STATE OF OREGON

Real Property Mortgage Records

<u>Counterpart No.</u>	<u>County</u>	<u>Date Recorded</u>	<u>Book, Film or Reel</u>	<u>Page</u>
11	Benton	May 11, 1971	24409	—
12	Clackamas	May 11, 1971	71-10026	—
13	Clatsop	May 11, 1971	347	503
14	Columbia	May 11, 1971	115	864
15	Coos	May 11, 1971	71-5-58818/52	—
16	Douglas	May 11, 1971	466	219
17	Hood River	May 11, 1971	710790	—
18	Lane	May 11, 1971	531R	—
19	Lincoln	May 11, 1971	25	760
20	Linn	May 11, 1971	MF14	877
21	Marion	May 11, 1971	670	171
22	Multnomah	May 11, 1971	786	1449
23	Polk	May 11, 1971	16	351
24	Tillamook	May 11, 1971	223	72
25	Wasco	May 11, 1971	710749	—
26	Washington	May 11, 1971	816	680
27	Yamhill	May 11, 1971	83	1952

Filed as a Financing Statement

<u>Counterpart No.</u>	<u>Office</u>	<u>Date Filed for Record</u>	<u>File Number</u>
9	Secretary of State.....	May 11, 1971	C-02566

(An executed counterpart of the Ninth Supplemental Indenture was filed on May 7, 1971 in the office of the Auditor of the City of Portland.)

IN THE STATE OF WASHINGTON

Real Property Mortgage Records

<u>Counterpart No.</u>	<u>County</u>	<u>Date Recorded</u>	<u>Book, Film or Reel</u>	<u>Page</u>
29	Clark	May 11, 1971	780758	—
30	Klickitat	May 11, 1971	104	263A
31	Skamania	May 11, 1971	48	969

Filed as a Financing Statement

<u>Counterpart No.</u>	<u>Office</u>	<u>Date Filed for Record</u>	<u>File Number</u>
28	Secretary of State	May 11, 1971	0124352

[CONFORMED COPY]

NORTHWEST NATURAL GAS COMPANY

TO

BANKERS TRUST COMPANY

AND

STANLEY BURG

(SUCCESSOR TO R. G. PAGE AND J. C. KENNEDY),

As Trustees under the Mortgage and Deed
of Trust, dated as of July 1, 1946, of
Portland Gas & Coke Company (now
Northwest Natural Gas Company)

Tenth Supplemental Indenture

providing among other things for
First Mortgage Bonds, 12% Series due 1984

Dated as of January 1, 1975

TENTH SUPPLEMENTAL INDENTURE

INDENTURE, dated as of the 1st day of January, 1975, made and entered into by and between NORTHWEST NATURAL GAS COMPANY (formerly Portland Gas & Coke Company), a corporation of the State of Oregon, whose post office address is Suite 300, 200 S.W. Market Street, Portland, Oregon, 97201 (hereinafter sometimes called the Company), party of the first part, and BANKERS TRUST COMPANY, a corporation of the State of New York, whose post office address is Sixteen Wall Street, New York, New York 10015 (hereinafter sometimes called the Corporate Trustee) and STANLEY BURG (successor to R. G. PAGE and J. C. KENNEDY), whose post office address is 23 Dover Green, Staten Island, New York 10312 (hereinafter sometimes called the Co-Trustee), parties of the second part (the Corporate Trustee and the Co-Trustee being hereinafter together sometimes called the Trustees), as Trustees under the Mortgage and Deed of Trust, dated as of July 1, 1946 (hereinafter called the Mortgage), executed and delivered by Portland Gas & Coke Company (now Northwest Natural Gas Company) to secure the payment of bonds issued or to be issued under and in accordance with the provisions of the Mortgage, this indenture (hereinafter called Tenth Supplemental Indenture) being supplemental thereto;

WHEREAS the Mortgage was or is to be recorded in the official records of various counties in the States of Oregon and Washington which counties include or will include all counties in which this Tenth Supplemental Indenture is to be recorded; and

WHEREAS by the Mortgage the Company covenanted that it would execute and deliver such supplemental indenture or indentures and such further instruments and do such further acts as might be necessary or proper to carry out more effectually the purposes of the Mortgage and to make subject to the lien of the Mortgage any property thereafter acquired, made or constructed and intended to be subject to the lien thereof; and

WHEREAS the Company executed and delivered to the Trustees its First Supplemental Indenture, dated as of June 1, 1949 (hereinafter called its First Supplemental Indenture), its Second Supplemental Indenture, dated as of March 1, 1954 (hereinafter called its Second Supplemental Indenture), its Third Supplemental Indenture, dated as of April 1, 1956 (hereinafter called its Third Supplemental Indenture), its Fourth Supplemental Indenture, dated as of February 1, 1959 (hereinafter called its Fourth Supple-

mental Indenture), its Fifth Supplemental Indenture, dated as of July 1, 1961 (hereinafter called its Fifth Supplemental Indenture), its Sixth Supplemental Indenture, dated as of January 1, 1964 (hereinafter called its Sixth Supplemental Indenture), its Seventh Supplemental Indenture, dated as of March 1, 1966 (hereinafter called its Seventh Supplemental Indenture), and its Eighth Supplemental Indenture, dated as of December 1, 1969 (hereinafter called its Eighth Supplemental Indenture); and

WHEREAS said First through Eighth Supplemental Indentures were filed for record, and were recorded and indexed, as a mortgage of both real and personal property, in the official records of various counties in the States of Oregon and Washington which counties include or will include all counties in which this Tenth Supplemental Indenture is to be recorded; and

WHEREAS the Company executed and delivered to the Trustees its Ninth Supplemental Indenture, dated as of April 1, 1971 (hereinafter called its Ninth Supplemental Indenture); and

WHEREAS said Ninth Supplemental Indenture was filed for record, and was recorded and indexed, as a mortgage of both real and personal property, and financing statements were filed, in the official records of the several counties and other offices in the States of Oregon and Washington listed below, as follows:

OREGON
Real Property Mortgage Records

<u>County</u>	<u>Date Recorded</u>	<u>Book, Film or Reel</u>	<u>Page</u>
Benton	May 11, 1971	24409	—
Clackamas	May 11, 1971	71-10026	—
Clatsop	May 11, 1971	347	503
Columbia	May 11, 1971	115	864
Cook	May 11, 1971	71-5-58818/52	—
Douglas	May 11, 1971	466	219
Hood River	May 11, 1971	710790	—
Lane	May 11, 1971	531R	—
Lincoln	May 11, 1971	25	760
Linn	May 11, 1971	MF14	877
Marion	May 11, 1971	670	171
Multnomah	May 11, 1971	786	1449
Polk	May 11, 1971	16	351
Tillamook	May 11, 1971	223	72
Wasco	May 11, 1971	710749	—
Washington	May 11, 1971	816	680
Yamhill	May 11, 1971	83	1952

Filed as a Financing Statement

<u>Office</u>	<u>Date Filed for Record</u>	<u>File Number</u>
Secretary of State	May 11, 1971	C-02566

(An executed counterpart of the Ninth Supplemental Indenture was filed on May 7, 1971 in the office of the Auditor of the City of Portland.)

WASHINGTON
Real Property Mortgage Records

<u>County</u>	<u>Date Recorded</u>	<u>Book, Film or Reel</u>	<u>Page</u>
Clark	May 11, 1971	780758	—
Klickitat	May 11, 1971	104	263A
Skamania	May 11, 1971	48	969

Filed as a Financing Statement

<u>Office</u>	<u>Date Filed for Record</u>	<u>File Number</u>
Secretary of State	May 11, 1971	0124352

and

WHEREAS an instrument dated as of June 14, 1951, was executed by the Company appointing J. C. Kennedy as Co-Trustee in succession to said R. G. Page (resigned) under the Mortgage and by J. C. Kennedy accepting the appointment as Co-Trustee under the Mortgage in succession to the said R. G. Page, which instrument was recorded in various counties in the States of Oregon and Washington; and

WHEREAS, in the Ninth Supplemental Indenture STANLEY BURG was appointed by the Company as Co-Trustee under the Mortgage in succession to said J. C. KENNEDY (resigned) and in the Ninth Supplemental Indenture Stanley Burg accepted such appointment as Co-Trustee under the Mortgage in succession to said J. C. Kennedy; and

WHEREAS in addition to the property described in the Mortgage, as heretofore supplemented, the Company has acquired certain other property, rights and interests in property; and

WHEREAS, the Company has heretofore issued, in accordance with the provisions of the Mortgage, as supplemented, the following series of First Mortgage Bonds:

<u>Series</u>	<u>Principal Amount Outstanding</u>
3 $\frac{1}{8}$ % Series due 1976.....	\$10,000,000
3 $\frac{7}{8}$ % Series due 1974.....	None
4 % Series due 1974.....	None
4 $\frac{3}{8}$ % Series due 1976.....	\$ 1,744,000
5 $\frac{1}{8}$ % Series due 1984.....	\$ 4,972,000
5 $\frac{1}{8}$ % Series due 1986.....	\$ 5,062,000
4 $\frac{3}{4}$ % Series due 1989.....	\$ 5,855,000
5 $\frac{3}{4}$ % Series due 1991.....	\$14,075,000
9 $\frac{3}{8}$ % Series due 1974.....	None
8 $\frac{5}{8}$ % Series due 1996.....	\$18,000,000;

and

WHEREAS Section 8 of the Mortgage provides that the form of each series of bonds (other than the First Series) issued thereunder shall be established by Resolution of the Board of Directors of the Company; that the form of such series, as established by said Board of Directors, shall specify the descriptive title of the bonds and various other terms thereof; and that such Series may also contain such provisions not inconsistent with the provisions of the Mortgage as the Board of Directors may, in its discretion, cause

to be inserted therein expressing or referring to the terms and conditions upon which such bonds are to be issued and/or secured under the Mortgage; and

WHEREAS Section 120 of the Mortgage provides, among other things, that any power, privilege or right expressly or impliedly reserved to or in any way conferred upon the Company by any provision of the Mortgage, whether such power, privilege or right is in any way restricted or is unrestricted, may (to the extent permitted by law) be in whole or in part waived or surrendered or subjected to any restriction if at the time unrestricted or to additional restriction if already restricted, and the Company may enter into any further covenants, limitations or restrictions for the benefit of any one or more series of bonds issued thereunder, or the Company may cure any ambiguity contained therein or in any supplemental indenture or may (in lieu of establishment by Resolution as provided in Section 8 of the Mortgage) establish the terms and provisions of any series of bonds other than said First Series, by an instrument in writing executed and acknowledged by the Company in such manner as would be necessary to entitle a conveyance of real estate to record in all of the states in which any property at the time subject to the lien of the Mortgage shall be situated; and

WHEREAS the Company now desires to create a new series of bonds and (pursuant to the provisions of Section 120 of the Mortgage) to add to its covenants and agreements contained in the Mortgage, as heretofore supplemented, certain other covenants and agreements to be observed by it and to alter and amend in certain respects the covenants and provisions contained in the Mortgage, as heretofore supplemented and amended; and

WHEREAS the Company wishes to secure the repayment of \$30,000,000 aggregate principal amount of its 12% Secured Notes Due 1984 (the "Secured Notes") issued pursuant to several Note Purchase Agreements dated December 31, 1974 (the "Note Purchase Agreements"), between the Company and the several purchasers named therein, by the issuance and pledge of \$30,000,000 aggregate principal amount of such new series of bonds to be created and issued pursuant to the Mortgage, as heretofore supplemented, and as supplemented by this Tenth Supplemental Indenture; and

WHEREAS the execution and delivery by the Company of this Tenth Supplemental Indenture, and the terms of the bonds of the Eleventh Series hereinafter referred to, have been duly authorized by the Board of Directors of the Company by appropriate resolutions of said Board of Directors;

NOW, THEREFORE, THIS INDENTURE WITNESSETH:

That Northwest Natural Gas Company, in consideration of the premises and of One Dollar to it duly paid by the Trustees at or before the ensembling and delivery of these presents, the receipt whereof is hereby acknowledged, and in further assurance of the estate, title and rights of the Trustees, and in order further to secure the payment both of the principal of and interest and premium, if any, on the bonds from time to time issued under the Mortgage, according to their tenor and effect, and the performance of all the provisions of the Mortgage (including any instruments supplemental thereto and any modification made as in the Mortgage provided) and of said bonds, hereby grants, bargains, sells, releases, conveys, assigns, transfers, mortgages, pledges, sets over and confirms (subject, however, to Excepted Encumbrances, as defined in Section 6 of the Mortgage) unto Stanley Burg and (to the extent of its legal capacity to hold the same for the purposes hereof) to Bankers Trust Company, as Trustees under the Mortgage, and to their successor or successors in said trust, and to said Trustees and their successors and assigns forever, all property, real, personal and mixed, acquired by the Company after the date of the Mortgage, of the kind or nature specifically mentioned in Article XXI of the Mortgage or of any other kind or nature (except any herein or in the Mortgage expressly excepted) now owned or, subject to the provisions of subsection (I) of Section 87 of the Mortgage, hereafter acquired by the Company (by purchase, consolidation, merger, donation, construction, erection or in any other way) and wheresoever situated, including (without in anywise limiting or impairing by the enumeration of the same the scope and intent of the foregoing) all lands, gas plants, by-product plants, gas holders, gas mains and pipes; all power sites, water rights, reservoirs, canals, raceways, dams, aqueducts, and all other rights or means for appropriating, conveying, storing and supplying water; all rights of way and roads; all plants for the generation of electricity by steam, water and/or other power; all power houses, street lighting systems, standards and other equipment incidental thereto, telephone, radio, television and air-conditioning systems and equipment incidental thereto, water works, water systems, steam heat and hot water plants, substations, lines, service and supply systems, bridges, culverts, tracts, ice or refrigeration plants and equipment, offices, buildings and other structures and the equipment thereof; all machinery, engines, boilers, dynamos, gas, electric and other machines, regulators, meters, transformers, generators, motors, gas, electrical and mechanical appliances, conduits, cables, gas, water, steam heat or other pipes, service pipes, fittings, valves and connections, pole

and transmission lines, wires, cables, tools, implements, apparatus, furniture and chattels; all franchises, consents or permits; all lines for the transmission and distribution of gas, electric current, steam heat or water for any purpose including mains, pipes, conduits, towers, poles, wires, cables, ducts and all apparatus for use in connection therewith; all real estate, lands, easements, servitudes, licenses, permits, franchises, privileges, rights of way and other rights in or relating to public or private property, real or personal, or the occupancy of such property and (except as herein or in the Mortgage, as heretofore supplemented, expressly excepted) all right, title and interest the Company may now have or may hereafter acquire in and to any and all property of any kind or nature wheresoever situated.

TOGETHER WITH all and singular the tenements, hereditaments, prescriptions, servitudes and appurtenances belonging or in anywise appertaining to the aforementioned property or any part thereof, with the reversion and reversions, remainder and remainders and (subject to the provisions of Section 57 of the Mortgage) the tolls, rents, revenues, issues, earnings, income, product and profits thereof, and all the estate, right, title and interest and claim whatsoever, at law as well as in equity, which the Company now has or may hereafter acquire in and to the aforementioned property and franchises and every part and parcel thereof.

IT IS HEREBY AGREED by the Company that, subject to the provisions of subsection (I) of Section 87 of the Mortgage, all the property, rights, and franchises acquired by the Company (by purchase, consolidation, merger, donation, construction, erection or in any other way) after the date hereof, except any herein or in the Mortgage, as heretofore supplemented, expressly excepted, shall be and are as fully granted and conveyed hereby and by the Mortgage, and as fully embraced within the lien hereof and the lien of the Mortgage, as supplemented, as if such property, rights and franchises were now owned by the Company and were specifically described herein or in the Mortgage, as heretofore supplemented, and conveyed hereby or thereby.

Provided that the following are not and are not intended to be now or hereafter granted, bargained, sold, released, conveyed, assigned, transferred, mortgaged, pledged, set over or confirmed hereunder and are hereby expressly excepted from the lien and operation of this Tenth Supplemental Indenture and from the lien and operation of the Mortgage, as heretofore supplemented, viz: (1) cash, shares of stock, bonds, notes and other obligations and other securities not hereafter specifically pledged, paid, deposited, delivered or held

under the Mortgage, as heretofore supplemented, or covenanted so to be; (2) merchandise, equipment, apparatus, materials or supplies held for the purpose of sale or other disposition in the usual course of business; fuel, oil and similar materials and supplies consumable in the operation of any of the properties of the Company; all aircraft, tractors, rolling stock, trolley coaches, buses, motor coaches, automobiles, motor trucks, and other vehicles and materials and supplies held for the purpose of repairing or replacing (in whole or part) any of the same; (3) bills, notes and accounts receivable, judgments, demands and choses in action, and all contracts, leases and operating agreements not specifically pledged under the Mortgage, as heretofore supplemented, or covenanted so to be; (4) the last day of the term of any lease or leasehold which may be or become subject to the lien of the Mortgage; (5) gas, petroleum, carbon, chemicals, light oils, tar products, electric energy, steam, water, ice, and other materials or products, manufactured, stored, generated, produced, purchased or acquired by the Company for sale, distribution or use in the ordinary course of its business; all timber, minerals, mineral rights and royalties and all Natural Gas and Oil Production Property, as defined in Section 4 of the Mortgage; and (6) the Company's franchise to be a corporation; provided, however, that the property and rights expressly excepted from the lien and operation of this Tenth Supplemental Indenture and from the lien and operation of the Mortgage, as heretofore supplemented, in the above subdivisions (2) and (3) shall (to the extent permitted by law) cease to be so excepted in the event and as of the date that either or both of the Trustees or a receiver or trustee shall enter upon and take possession of the Mortgaged and Pledged Property in the manner provided in Article XIII of the Mortgage by reason of the occurrence of a Default as defined in Section 65 thereof.

TO HAVE AND TO HOLD all such properties, real, personal and mixed, granted, bargained, sold, released, conveyed, assigned, transferred, mortgaged, pledged, set over or confirmed by the Company as aforesaid, or intended so to be, unto Stanley Burg and (to the extent of its legal capacity to hold the same for the purposes hereof) to Bankers Trust Company, as Trustees, and their successors and assigns forever.

IN TRUST NEVERTHELESS, for the same purposes and upon the same terms, trusts and conditions and subject to and with the same provisos and covenants as are set forth in the Mortgage, as heretofore supplemented, this Tenth Supplemental Indenture being supplemental thereto.

AND IT IS HEREBY COVENANTED by the Company that all the terms, conditions, provisos, covenants and provisions contained in the Mortgage, as heretofore supplemented, shall affect and apply to the property hereinbefore described and conveyed, and to the estates, rights, obligations and duties of the Company and the Trustees and the beneficiaries of the trust with respect to said property, and to the Trustees and their successors in the trust, in the same manner and with the same effect as if the said property had been owned by the Company at the time of the execution of the Mortgage, and had been specifically and at length described in and conveyed to said Trustees by the Mortgage as a part of the property therein stated to be conveyed.

The Company further covenants and agrees to and with the Trustees and their successors in said trust under the Mortgage, as follows:

ARTICLE I.

Eleventh Series of Bonds.

SECTION 1.01. *Amount, Interest and Maturity.* There shall be a series of bonds designated "12% Series due 1984" (herein sometimes referred to as the "Eleventh Series"), each of which shall also bear the descriptive title First Mortgage Bond, and the form thereof, which shall be established by Resolution of the Board of Directors of the Company, shall contain suitable provisions with respect to the matters hereinafter in this Section specified. Bonds of the Eleventh Series shall be limited to \$30,000,000 in aggregate principal amount at any one time Outstanding except as provided in Section 16 of the Mortgage and shall mature on December 1, 1984, and shall be issued as fully registered bonds in denominations of One Thousand Dollars and, at the option of the Company, in any multiple or multiples of One Thousand Dollars (the exercise of such option to be evidenced by the execution and delivery thereof); they shall bear interest from January 21, 1975 at the rate of 12% per annum (computed on the basis of a 360-day year of twelve 30-day months), payable, subject to Section 1.03 hereof, semi-annually on June 1 and December 1 of each year, commencing June 1, 1975; and the principal of, premium, if any, and interest on each said bond shall be payable at the office or agency of the Company in the Borough of Manhattan, the City of New York, in such coin or currency of the United States of America as at the time of payment is legal tender for public and private debts, and, at the option of the Company, may be paid by check mailed to the registered holder thereof. Bonds of the Eleventh Series shall be dated as in Section 10 of the Mortgage provided.

SECTION 1.02. *Redemption.* Bonds of the Eleventh Series shall be redeemable at the option of the Company on any date on or after December 1, 1979 in accordance with the requirements of the Mortgage in whole at any time, or in part from time to time (if in part, in multiples of \$100,000 but in amounts not less than \$1,000,000 in aggregate principal amount of such bonds), prior to maturity, upon notice, as provided in Section 52 of the Mortgage, mailed at least thirty (30) days prior to the date fixed for redemption at the following redemption prices, expressed in percentages of the principal amount of the bonds to be redeemed:

<u>If redeemed during the twelve-month period beginning December 1,</u>	<u>Percentage</u>
1979	105.00%
1980	103.75
1981	102.50
1982	101.25
1983 and thereafter	100.00

in each case, together with accrued interest to the date fixed for redemption; *provided, however,* that prior to June 1, 1984, no bonds of the Eleventh Series may be redeemed pursuant to this Section prior to maturity as part of or in anticipation of any refinancing operation involving, directly or indirectly, the incurring of indebtedness by the Company or any subsidiary or affiliate thereof for borrowed funds having an interest rate or cost (calculated in accordance with generally accepted financial practice) of less than 12% per annum. The term "affiliate" means a person directly or indirectly controlling, controlled by, or under direct or indirect common control with, the Company. A person shall be deemed to control a corporation or other person, for the purpose of this definition, if such person possesses, directly or indirectly, the power to direct or cause the direction of the management and policies of such corporation or other person, whether through the ownership of voting securities, by contract, or otherwise. The term "subsidiary" means any corporation at least a majority of whose outstanding voting stock shall at the time be owned by the Company and/or by one or more subsidiaries of the Company.

Bonds of the Eleventh Series shall be redeemable by the application of cash deposited with the Corporate Trustee pursuant to the provisions of Section 39 or Section 64 of the Mortgage or with the Proceeds of Released Property; *provided, however,* that no bonds of the Eleventh Series shall be redeemable pursuant to any Section of the Mortgage (other than pursuant to the first paragraph of this Section 1.02) which permits the Com-

pany to designate one or more series from which redemption is to be made without the prior written consent of the holders of not less than 70% of the principal amount of the bonds of the Eleventh Series then Outstanding, which consent shall be requested by the Company. Any such redemption, if consented to, shall be made at a redemption price equal to 100% of the principal amount thereof, together with accrued interest to the date fixed for redemption.

Subject to the provisions of Section 1.03 hereof, Bonds of the Eleventh Series shall be redeemed through the annual operation of the sinking fund pursuant to Article II hereof at a sinking fund redemption price equal to 100% of the principal amount thereof, in each case together with accrued interest to the date fixed for redemption.

SECTION 1.03. *Effect of Payment of Secured Notes; Covenant to Pay.* The obligation of the Company to pay the principal of, premium, if any, and interest on the bonds of the Eleventh Series on any date fixed for the payment of such amounts pursuant to this Tenth Supplemental Indenture shall be discharged by (i) the payment of all of the corresponding amounts when due and payable in respect of the principal of, premium, if any, and interest on the Secured Notes to be issued pursuant to Note Purchase Agreements, each dated December 31, 1974, between the Company and the purchasers named therein; and (ii) in the case of payments of principal and premium, if any, the presentation and surrender for cancellation or exchange, or the presentation for notation, of the bonds of the Eleventh Series to the Corporate Trustee as provided in Section 54 of the Mortgage. Without limiting the effect of the foregoing, prepayment of the Secured Notes pursuant to Section 2.01 or 2.02 of the Note Purchase Agreements shall, upon presentation and surrender for cancellation or exchange, or presentation for notation, of the bonds of the Eleventh Series as provided in the preceding sentence, discharge the obligation hereunder to make an Eleventh Series Sinking Fund Payment or redemption pursuant to Section 2.01, 2.02 or 1.02 hereof for the corresponding date. If any amounts payable in respect of the Secured Notes on a date fixed for the payment thereof pursuant to the Note Purchase Agreements shall not be paid on such date, the corresponding amount payable in respect of the bonds of the Eleventh Series on such date, or the portion thereof which is equal to that portion of the amounts then payable in respect of the Secured Notes and remaining unpaid, shall be paid to the registered owners of the bonds of the Eleventh Series.

The Company covenants that it will duly and punctually pay the principal of, premium, if any, and interest on the Secured Notes as and when the same shall become due and payable whether at maturity, upon redemption,

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whether mandatory or optional, by declaration or otherwise. The Company covenants that it will promptly notify the Corporate Trustee of any Event of Default under the Note Purchase Agreements.

SECTION 1.04. *Payment Certificates.* The Company shall, if it is the case, deliver to the Corporate Trustee on each date on which any amounts would otherwise be required to be paid in respect of bonds of the Eleventh Series pursuant to the provisions hereof and of the Mortgage, an Officers' Certificate (the "Payment Certificate") that it has duly and punctually made the corresponding payments in respect of the Secured Notes, in which event the Company shall not, unless default is made in the making of any such payment on the Secured Notes, be required to pay any such amounts in respect of bonds of the Eleventh Series. The Corporate Trustee shall be entitled to rely conclusively upon any Payment Certificate delivered by the Company unless and until it shall have received written notice from the holder of any bond of the Eleventh Series that any such amounts so payable in respect of the Secured Notes have not been duly paid.

SECTION 1.05. *Exchange and Registration.* At the option of the registered owner, any bonds of the Eleventh Series, upon surrender thereof, for cancellation, at the office or agency of the Company in the Borough of Manhattan, the City of New York, shall (subject to the provisions of Section 12 of the Mortgage) be exchangeable for a like aggregate principal amount of bonds of the same series of other authorized denominations.

Transfers of bonds of the Eleventh Series may be registered (subject to the provisions of Section 12 of the Mortgage) at the office or agency of the Company in the Borough of Manhattan, the City of New York.

Upon any registration of transfer or exchange of bonds of the Eleventh Series, the Company may make a charge therefor sufficient to reimburse it for any tax or taxes or other governmental charge, as provided in Section 12 of the Mortgage, but the Company hereby waives any right to make a charge in addition thereto for any registration or exchange or transfer of bonds of the Eleventh Series.

ARTICLE II.

Sinking Fund for Bonds of the Eleventh Series.

SECTION 2.01. *Regular Sinking Fund and Dates.* Subject to the provisions of Section 1.03 hereof, the Company covenants that, unless all bonds

of the Eleventh Series shall have ceased to be Outstanding, it will, as a sinking fund for the retirement of bonds of the Eleventh Series, pay to the Corporate Trustee an amount in cash not later than December 1 in each of the years 1979 to and including 1983 (subject to acceleration pursuant to Section 2.02 hereof) sufficient to redeem \$4,500,000 principal amount of such bonds (subject to adjustment pursuant to Section 2.02 hereof) at the sinking fund redemption price, together with accrued interest thereon to the date fixed for redemption. The dates upon which such payments are to be made are herein called "Eleventh Series Sinking Fund Payment Dates". The amount to be paid to the Corporate Trustee on an Eleventh Series Sinking Fund Payment Date is herein called an "Eleventh Series Sinking Fund Payment".

The Company shall not be entitled to increase, or to anticipate, any payment in satisfaction of its obligations in respect of the Sinking Fund for the Eleventh Series, except as specifically provided in Section 2.02 below. The Company will not, and will not permit any subsidiary to, acquire directly or indirectly by purchase or otherwise any of the outstanding bonds of the Eleventh Series except by way of payment or redemption in accordance with the provisions of this Tenth Supplemental Indenture.

SECTION 2.02. Adjusted Sinking Fund Payments and Accelerated Sinking Fund Payment Dates. The terms used in this Section 2.02 shall have the meanings defined in Section 2.03. On or before March 31 of each year beginning with the year 1975, the Company covenants that it shall file a Certificate of Firm Gas Supply with the Trustee and, so long as any original holder of bonds of the Eleventh Series continues to hold any of such bonds, deliver a copy of such Certificate to such original holder. If the Date of Exhaustion of Firm Gas Supply shown by the Certificate of Firm Gas Supply so filed shall be a date earlier than December 1, 1984, then the dates of the Eleventh Series Sinking Fund Payment Dates and the amounts of the Eleventh Series Sinking Fund Payments shall be redetermined as follows: The aggregate principal amount of bonds of the Eleventh Series outstanding on the date on which such certificate was filed shall be divided by the number of December 1sts subsequent to the date on which such certificate is filed and prior to such Date of Exhaustion. The resulting quotient (rounded to the next higher integral multiple of \$1,000 if the quotient is not an integral multiple of \$1,000) shall thereupon become the adjusted Eleventh Series Sinking Fund Payment. Each December 1st subsequent to the

date on which such certificate is filed and prior to such Date of Exhaustion that is also prior to December 1, 1979 shall thereupon become an accelerated Eleventh Series Sinking Fund Payment Date. Such adjusted Eleventh Series Sinking Fund Payment shall then be paid to the Corporate Trustee not later than each Eleventh Series Sinking Fund Payment Date, including any accelerated Eleventh Series Sinking Fund Payment Date.

If any Certificate of Firm Gas Supply filed in any year after the Company's Eleventh Series Sinking Fund Payment has been adjusted as hereinabove provided shall show a Date of Exhaustion of Firm Gas Supply that is both different from the Date of Exhaustion shown in the most recent previous Certificate of Firm Gas Supply and prior to December 1, 1984, the amount of the Company's remaining adjusted Eleventh Series Sinking Fund Payments shall again be adjusted in the same manner as provided above. If any such subsequently filed Certificate of Firm Gas Supply shall show a Date of Exhaustion later than November 30, 1984, then (until such time as a further subsequent Certificate of Firm Gas Supply shall be filed showing a Date of Exhaustion prior to December 1, 1984) no further payments on accelerated Eleventh Series Sinking Fund Payment Dates shall be required to be made and the remaining Eleventh Series Sinking Fund Payments shall be made as provided, exclusive of any adjustment, in the first paragraph of Section 2.01, except that (1) if less than \$22,500,000 shall then have been paid, each such remaining Eleventh Series Sinking Fund Payment shall be reduced by a fraction computed by dividing (i) the sum of (x) any Eleventh Series Sinking Fund Payments theretofore made on accelerated Eleventh Series Sinking Fund Payment Dates plus (y) the aggregate amount of any excess of an adjusted Eleventh Series Sinking Fund Payment over \$4,500,000 for all such payments theretofore made on the Eleventh Series Sinking Fund Payment Dates after December 1, 1978, by (ii) \$4,500,000 multiplied by the number of December 1sts which are subsequent to both December 1, 1978 and the date such Certificate is filed and which are prior to December 1, 1984, or (2) if \$22,500,000 or more shall then have been paid, no further payments shall be required to be made on any remaining Eleventh Series Sinking Fund Payment Dates.

Nothing contained in this Section 2.02 shall affect the obligation of the Company to repay the unpaid principal amount of bonds of the Eleventh Series at maturity on December 1, 1984.

SECTION 2.03. *Certain Definitions.* For purposes of this Article II, the following terms shall have the following meanings:

The term "*Certificate of Firm Gas Supply*" shall mean an Officers' Certificate which shall state:

- (a) The Company's Firm Gas Supply as at January 1 of the year in which such Certificate is filed;

(b) The Company's Annual Gas Requirements;

(c) The Company's Firm Gas Supply Life as at January 1 of the year in which such Certificate is filed; and

(d) The Date of Exhaustion of Firm Gas Supply.

The terms "*Date of Exhaustion of Firm Gas Supply*" or "*Date of Exhaustion*" shall mean the first day of the calendar month next following the end of the period commencing on January 1 of the year in which a Certificate of Firm Gas Supply is filed and extending for the Firm Gas Supply Life shown in such Certificate.

The term "*Firm Gas Supply Life*" shall mean a period of years, stated to the nearest 1/10 of a year, computed by dividing the Company's Firm Gas Supply by the Company's Annual Gas Requirements, each stated in a Certificate of Firm Gas Supply.

The term "*Annual Gas Requirements*" shall mean, for the purposes of any Certificate of Firm Gas Supply, the average of the aggregate annual amount in Therms of all gas sold and of all gas used by the Company during the three calendar years next preceding the date of such Certificate, including gas unaccounted for but excluding the excess, if any, in Therms, of the average aggregate annual amount of gas sold on an interruptible basis during the same period over 35% of the average aggregate annual amount of all gas sold and used.

The term "*Firm Gas Supply*" shall mean, for the purposes of any Certificate of Firm Gas Supply, the sum, without duplication, of

(a) the aggregate amount in Therms of proven (as evidenced by an independent geologist's certificate dated January 1st or later of the then current year) recoverable natural gas reserves of Distribution Quality (including gas in solution or in a common reservoir with oil or distillate and to be produced with such oil or distillate in the form of casing-head gas) controlled by the Company by virtue of leaseholds owned by the Company or by virtue of contracts or other legal entitlements under which the Company is entitled to purchase natural gas produced from such reserves, which, after taking into account the current availability of transportation facilities and all other pertinent factors relative to such reserves, the Company can reasonably expect to produce, at economically practicable prices, and have delivered to it and to transport to its markets to meet requirements in the future for sales to its customers, after exclud-

ing from such aggregate any amounts to be utilized in connection with the production of Liquefied Natural Gas included under (c) or (e); *provided*, however, that no amounts shall be taken into account hereunder from any reserve unless on or prior to the date of such Certificate, (i) all necessary regulatory approvals required for the commencement and continuation of withdrawals from such reserves and deliveries to the Company's markets have been obtained and are still in full force and effect and (ii) construction of any facilities required for the withdrawal of such gas is in progress and is reasonably expected by the Company to be completed within a period of eighteen months from the date of such Certificate;

(b) to the extent not included in (a) above, the aggregate amount in Therms of gas of Distribution Quality owned or controlled by the Company in storage reservoirs, excluding non-recoverable cushion gas;

(c) the aggregate amount in Therms of Distribution Quality gas which the Company is entitled to purchase or otherwise acquire from interstate, intrastate or Canadian gas pipeline companies under any contract or other legal entitlement providing for the delivery of such gas to, or for the account of, the Company, *provided* that on or prior to the date of such Certificate, all necessary regulatory approvals required for the commencement and continuation of deliveries to the Company of such gas have been obtained and are still in full force and effect, and *provided further* that such aggregate amount shall be diminished by the excess, if any, of (i) that portion which, in light of the circumstances existing on the date of such Certificate, can reasonably be expected will not be delivered to the Company because (x) the Company has received notice or has reason to believe that such pipeline supplier does not intend to or cannot deliver such portion, or (y) the Company has not reasonably assured itself to the extent feasible that such pipeline supplier has itself a sufficient gas supply to perform its contract or other legal obligation for delivery of such portion to, or for the account of, the Company over (ii) the aggregate amount, if any, of Synthetic Gas of Distribution Quality and/or Liquefied Natural Gas of Distribution Quality meeting the requirements of subsections (d) and (e) below (except for the dates set forth in clauses (iii) of such subsections) available to the Company by reason of arrangements made in response to reduction of pipeline supply resulting from the events referred to in (i) above;

(d) the aggregate amount in Therms of Synthetic Gas of Distribution Quality controlled by the Company by virtue of an interest held by the Company in, or under contracts or other legal entitlements to purchase or otherwise acquire production from, any facilities for the production of Synthetic Gas, *provided* that (i) all regulatory approvals required to be obtained on or prior to the date of such Certificate for the construction or operation of such facilities and the purchase or other acquisition of such gas have been obtained and are still in full force and effect, and that construction of such facilities (if not completed) is in progress and is reasonably expected by the Company to be completed within a period of eighteen months from the date of such Certificate, (ii) no event or circumstance has occurred which would prevent the completion and operation of any project of which such facilities are a part, and (iii) any such amount of Synthetic Gas shall as of the date of such Certificate be available to the Company for a remaining term ending not earlier than December 1, 1984; and

(e) the aggregate amount in Therms of Liquefied Natural Gas of Distribution Quality controlled by the Company by virtue of an interest held by the Company in, or under contracts or other legal entitlements to purchase or otherwise acquire production from, any facilities for the liquefaction of natural gas, *provided* that (i) all regulatory approvals required to be obtained on or prior to the date of such Certificate for the construction or operation of such facilities and the purchase or other acquisition of such gas have been obtained and are still in full force and effect, and that construction of such facilities (if not completed) is in progress and is reasonably expected by the Company to be completed within a period of eighteen months from the date of such Certificate, (ii) no event or circumstance has occurred which would prevent the completion and operation of any project of which such facilities are a part, and (iii) any such amount of Liquefied Natural Gas shall as of the date of such Certificate be available to the Company for a remaining term ending not earlier than June 1, 1984;

provided, however, that in the case of (c), the signers of any Certificate of Firm Gas Supply may, if they shall consider such information reliable and of sufficiently recent date and so state in such Certificate, rely on any figures relating to the gas supply of any pipeline supplier contained in the certificate of gas supply most recently filed with a trustee under any indenture securing

bonds or other obligations of said pipeline supplier if (i) such certificate was signed by a person who would qualify as an independent geologist under such indenture and (ii) pursuant to the terms of said indenture, the signer of such certificate of gas supply, in rendering the opinion set forth therein, shall be required to consider substantially the same factors in a substantially similar manner in determining the amount of such gas supply as are required to be considered by the signers of a Certificate of Firm Gas Supply under this Section 2.03 in determining the Firm Gas Supply of the Company, and such certificate of gas supply of the supplier shall be submitted, in conjunction with the Company's Certificate of Firm Gas Supply, to the Trustee and to the original holders of the bonds of the Eleventh Series so long as such original holder continues to hold any such Series; *provided, further*, that in the case of (d) and (e), the aggregate amounts will be included only to the extent that, in the express written opinion of the signers of the Certificate of Firm Gas Supply hereunder, (i) the design, capacity and useful life of such facilities will permit the production of such amount; (ii) raw materials to be consumed in the production of Synthetic Gas by any facilities referred to in (d) have been acquired or contracted for in quantities sufficient to permit the production of such amount; (iii) the natural gas required to be consumed or used in the production of Liquefied Natural Gas by any facilities referred to in (e) has been acquired or contracted for in quantities sufficient to permit the production of such amount; and (iv) the nature and extent of the Company's interest in such facilities, or the contracts or other legal entitlements by virtue of which the Company has rights to purchase or otherwise acquire production therefrom, and the Company's ability to procure the transportation thereof, are such as to permit the Company to obtain the delivery of such amount; *and provided, further*, in computing Firm Gas Supply, any gas, including Liquefied Natural Gas and Synthetic Gas, available to the Company from sources not located in the United States of America, whether owned by the Company, its supplier or any supplier of such supplier, shall be included only to the extent that the amount thereof (i) can reasonably be expected to be transported into the United States, over the life of any applicable contract to which the Company is a party, by the Company or its supplier or for delivery to such supplier for sale to the Company, (ii) can be exported from the foreign sources without violating any law, regulation or embargo of any country other than the United States having jurisdiction thereof relating to the export of such gas, and (iii) can be imported into the United States by the Company or its supplier or for delivery to such supplier for sale to the Company without violating any law, regulation or embargo of the United States relating to the import of such gas.

The term "*Distribution Quality*", when used in reference to any gas, shall mean gas which upon delivery to the Company or after further treatment or processing by available and feasible means, or after blending with other gas available to the Company, is of a quality susceptible for sale or use by the Company in satisfying its gas requirements.

The term "*Liquefied Natural Gas*" shall mean natural gas converted to a liquid form and which is subject to regasification.

The term "*Synthetic Gas*" shall mean gas produced by the conversion of coal, oil, naphtha, oil shale or any other substance from a solid or a liquid to a gaseous state, but shall not include gas produced by the regasification of Liquefied Natural Gas.

The term "*Therms*" shall mean 100,000 British thermal units.

SECTION 2.04. *Treatment of Certain Amounts.* For all purposes of the Mortgage (including all calculations thereunder), so long as any bonds of the Eleventh Series remain Outstanding, as defined in Section 2 of the Mortgage:

- (i) any cash deposited under the provisions of this Article shall be deemed to be Funded Cash; and
- (ii) any bonds of the Eleventh Series delivered to the Corporate Trustee pursuant to the provisions of this Article shall, after such delivery, be deemed to have been retired by the use of Funded Cash.

Any bonds issued under the Mortgage, delivered to or deposited with the Corporate Trustee by the Company pursuant to the provisions of this Section, shall forthwith be canceled by the Corporate Trustee.

SECTION 2.05. *Waivers.* Any provision of this Article II may be waived with, and only with, the consent of the holders of 100% of the aggregate unpaid principal amount of the bonds of the Eleventh Series.

ARTICLE III.

Miscellaneous Provisions.

SECTION 3.01. Subject to the amendments provided for in this Tenth Supplemental Indenture, the terms defined in the Mortgage, as heretofore

supplemented, shall, for all purposes of this Tenth Supplemental Indenture, have the meanings specified in the Mortgage, as heretofore supplemented.

SECTION 3.02. Section 55 of the Mortgage, as amended, is hereby further amended by inserting the words "and subject to the provisions of Article II of the Tenth Supplemental Indenture dated as of January 1, 1975," after the words "April 1, 1971".

SECTION 3.03. So long as any bonds of the Eleventh Series remain Outstanding, subdivision (c) of Section 65 of the Mortgage is hereby amended to read as follows:

"(c) (1) Failure to pay interest upon or principal (whether at maturity as therein expressed or by declaration, or otherwise) of any Outstanding Qualified Lien Bonds continued beyond the period of grace, if any, specified in the Qualified Lien securing the same; or (2) failure to pay the principal of, or premium, if any, or interest on (whether at maturity or any prepayment or interest payment date as therein expressed, or by acceleration or otherwise) any of the Company's Secured Notes due 1984 issued under its Note Purchase Agreements dated December 31, 1974, when any such payment is due and such failure shall have continued beyond any applicable period of grace specified in such Agreements."

SECTION 3.04. If for purposes of Section 113 of the Mortgage, the bonds of the Eleventh Series otherwise Outstanding within the meaning of Section 2 of the Mortgage shall at any time be deemed not to be Outstanding, the Company covenants that it will not (i) consent to any amendment or modification of the Mortgage, or of any indenture supplemental thereto (if, in such case, the consent of holders of such bonds of the Eleventh Series would be required if such bonds had been deemed to be Outstanding for purposes of such Section), unless prior thereto the Company, treating the bonds of the Eleventh Series as Outstanding for this purpose, has obtained the consent of the holders of the requisite percentage in aggregate principal amount of First Mortgage Bonds then Outstanding, or (ii) without the prior written consent of holders of not less than 66 $\frac{2}{3}$ % of the aggregate principal amount of Bonds of the Eleventh Series then Outstanding within the meaning of Section 2 of the Mortgage, consent to any amendment or modification of this Tenth Supplemental Indenture.

SECTION 3.05. The Trustees hereby accept the trusts hereby declared provided, created or supplemented, and agree to perform the same upon the

terms and conditions herein and in the Mortgage, as heretofore supplemented, set forth, including the following:

The Trustees shall not be responsible in any manner whatsoever for or in respect of the validity or sufficiency of this Tenth Supplemental Indenture or for or in respect of the recitals contained herein, all of which recitals are made by the Company solely. In general each and every term and condition contained in Article XVII of the Mortgage shall apply to and form part of this Tenth Supplemental Indenture with the same force and effect as if the same were herein set forth in full, with such omissions, variations and insertions, if any, as may be appropriate to make the same conform to the provisions of the Tenth Supplemental Indenture.

SECTION 3.06. To the extent permitted by Sections 88 and 89 of the Mortgage, the Trustees or either of them may rely and shall be protected in acting upon any certificate delivered under Article I or Article II and believed by them, it or him to be genuine and to have been signed or presented by the proper party or parties.

SECTION 3.07. Whenever in this Tenth Supplemental Indenture any of the parties hereto is named or referred to, this shall, subject to the provisions of Articles XVI and XVII of the Mortgage, be deemed to include the successors or assigns of such party, and all the covenants and agreements in this Tenth Supplemental Indenture contained by or on behalf of the Company or by or on behalf of the Trustees shall bind and inure to the benefit of the respective successors and assigns of such parties whether so expressed or not.

SECTION 3.08. Nothing in this Tenth Supplemental Indenture, expressed or implied, is intended, or shall be construed, to confer upon, or to give to, any person, firm or corporation, other than the parties hereto and the holders of the bonds and coupons outstanding under the Mortgage, any right, remedy, or claim under or by reason of this Tenth Supplemental Indenture or any covenant, condition, stipulation, promise or agreement hereof, and all the covenants, conditions, stipulations, promises and agreements by or on behalf of the Company as set forth in this Tenth Supplemental Indenture shall be for the sole and exclusive benefit of the parties hereto, and of the holders of the bonds and of the coupons outstanding under the Mortgage.

SECTION 3.09. This Tenth Supplemental Indenture has been executed in several identical counterparts, each of which shall be an original and all of which shall constitute but one and the same instrument.

IN WITNESS WHEREOF, Northwest Natural Gas Company, party hereto of the first part, has caused its corporate name to be hereunto affixed, and this

instrument to be signed and sealed by its President or one of its Vice Presidents, and its corporate seal to be attested by its Secretary or one of its Assistant Secretaries for and in its behalf on the 13th day of January, 1975, as of January 1, 1975 in the City of Portland, Oregon; Bankers Trust Company, one of the parties hereto of the second part, has caused its corporate name to be hereunto affixed, and this instrument to be signed and sealed by one of its Vice Presidents or one of its Assistant Vice Presidents and its corporate seal to be attested by one of its Assistant Secretaries; and Stanley Burg, one of the parties hereto of the second part, has hereunto set his hand and affixed his seal, all in The City of New York, on the 16th day of January, 1975, as of January 1, 1975.

NORTHWEST NATURAL GAS COMPANY

By FRANCIS F. HILL
President.

Attest:

W. E. RADFORD
Secretary.

Executed, sealed and delivered by NORTHWEST
NATURAL GAS COMPANY in the presence of:

[CORPORATE SEAL]

JOSEPH S. LONG
KATHLEEN SKINNER

BANKERS TRUST COMPANY, as Trustee,

By W. L. TISCHLER
Assistant Vice President.

Attest:

JUNE A. GRABER
Assistant Secretary.

STANLEY BURG (L.S.)
STANLEY BURG, *as Trustee.*

Executed, sealed and delivered by BANKERS
TRUST COMPANY and STANLEY BURG in
the presence of:

[CORPORATE SEAL]

S. D. MINEO
K. MCGRAW

STATE OF OREGON }
COUNTY OF MULTNOMAH } ss.:

January 13, A. D. 1975.

Before me personally appeared FRANCIS F. HILL, who, being duly sworn, did say that he is President of NORTHWEST NATURAL GAS COMPANY and that the seal affixed to the foregoing instrument is the corporate seal of said Corporation and that said instrument was signed and sealed in behalf of said Corporation by authority of its Board of Directors; and he acknowledged said instrument to be its voluntary act and deed.

On this 13th day of January, 1975, before me personally appeared FRANCIS F. HILL, to me known to be President of NORTHWEST NATURAL GAS COMPANY, one of the corporations that executed the within and foregoing instrument, and acknowledged said instrument to be the free and voluntary act and deed of said Corporation, for the uses and purposes therein mentioned, and on oath stated that he was authorized to execute said instrument and that the seal affixed is the corporate seal of said Corporation.

IN WITNESS WHEREOF I have hereunto set my hand and affixed my official seal the day and year first above written.

H. W. PIERCE
Notary Public for Oregon

My commission expires January 25, 1984

[NOTARIAL SEAL]

STATE OF NEW YORK }
COUNTY OF NEW YORK } ss.:

January 16, A. D. 1975.

Before me personally appeared W. L. TISCHLER, who, being duly sworn, did say that he is an Assistant Vice President of BANKERS TRUST COMPANY and that the seal affixed to the foregoing instrument is the corporate seal of said Corporation and that said instrument was signed and sealed in behalf of said Corporation by authority of its Board of Directors; and he acknowledged said instrument to be its voluntary act and deed.

On this 16th day of January, 1975, before me personally appeared W. L. TISCHLER, to me known to be an Assistant Vice President of BANKERS TRUST COMPANY, one of the corporations that executed the within and foregoing instrument, and acknowledged said instrument to be the free and voluntary act and deed of said Corporation, for the uses and purposes therein mentioned, and on oath stated that he was authorized to execute said instrument and that the seal affixed is the corporate seal of said Corporation.

IN WITNESS WHEREOF I have hereunto set my hand and affixed my official seal the day and year first above written.

[NOTARIAL SEAL]

CHRISTINE GERACE
CHRISTINE GERACE
Notary Public, State of New York
No. 43-1407147
Qualified in Richmond County
Certificate filed in New York County
Commission Expires March 30, 1975

STATE OF NEW YORK }
COUNTY OF NEW YORK } ss.:

January 16, A. D. 1975.

Before me personally appeared the above-named STANLEY BURG and acknowledged the foregoing instrument to be his voluntary act and deed.

On this day personally appeared before me STANLEY BURG to me known to be the individual described in and who executed the within and foregoing instrument, and acknowledged that he signed the same as his free and voluntary act and deed, for the uses and purposes therein mentioned.

Given under my hand and official seal this 16th day of January, 1975.

[NOTARIAL SEAL]

CHRISTINE GERACE
CHRISTINE GERACE
Notary Public, State of New York
No. 43-1407147
Qualified in Richmond County
Certificate filed in New York County
Commission Expires March 30, 1975

**SUMMARY OF RECORDING DATA
IN THE STATE OF OREGON**

Real Property Mortgage Records

<u>Counterpart No.</u>	<u>County</u>	<u>Date Recorded</u>	<u>Book, Film or Reel</u>	<u>Page</u>
16	Benton	January 27, 1975	53450	—
17	Clackamas	January 27, 1975	75-2101	—
18	Clatsop	January 27, 1975	406	698
19	Columbia	January 27, 1975	131	162
20	Coos	January 27, 1975	75 1-109240/65	—
21	Douglas	January 27, 1975	562	540
22	Hood River	January 27, 1975	750137	—
23	Lane	January 27, 1975	727 R	—
24	Lincoln	January 28, 1975	54	970
25	Linn	January 27, 1975	MF 101	828
26	Marion	January 27, 1975	7	1849
13	Multnomah	January 21, 1975	1024	1415
27	Polk	January 27, 1975	67	212
28	Tillamook	January 27, 1975	239	329
29	Wasco	January 27, 1975	750186	26
30	Washington	January 28, 1975	1009	141
31	Yamhill	January 27, 1975	104	150

Filed as a Financing Statement

<u>Counterpart No.</u>	<u>Office</u>	<u>Date Filed for Record</u>	<u>File Number</u>
14	Secretary of State	January 28, 1975	D-05654

(An executed counterpart of the Tenth Supplemental Indenture was filed on February 12, 1975, in the office of the Auditor of the City of Portland.)

IN THE STATE OF WASHINGTON

Real Property Mortgage Records

<u>Counterpart No.</u>	<u>County</u>	<u>Date Recorded</u>	<u>Book, Film or Reel</u>	<u>Page</u>
33	Clark	January 27, 1975	G 681197	943795
34	Klickitat	January 27, 1975	112	9
35	Skamania	January 27, 1975	52	420

Filed as a Financing Statement

<u>Counterpart No.</u>	<u>Office</u>	<u>Date Filed for Record</u>	<u>File Number</u>
32	Secretary of State	January 27, 1975	0282357

NORTHWEST NATURAL GAS COMPANY

TO

BANKERS TRUST COMPANY

AND

STANLEY BURG

(SUCCESSOR TO R. G. PAGE AND J. C. KENNEDY),

As Trustees under the Mortgage and Deed
of Trust, dated as of July 1, 1946, of
Portland Gas & Coke Company (now
Northwest Natural Gas Company)

Eleventh Supplemental Indenture

providing among other things for
First Mortgage Bonds, 10½% Series due 1986

Dated as of December 1, 1975

ELEVENTH SUPPLEMENTAL INDENTURE

INDENTURE, dated as of the 1st day of December, 1975, made and entered into by and between NORTHWEST NATURAL GAS COMPANY (formerly Portland Gas & Coke Company), a corporation of the State of Oregon, whose post office address is Suite 300, 200 S.W. Market Street, Portland, Oregon 97201 (hereinafter sometimes called the Company), party of the first part, and BANKERS TRUST COMPANY, a corporation of the State of New York, whose post office address is One Bankers Trust Plaza, New York, New York 10005 (hereinafter sometimes called the Corporate Trustee) and STANLEY BURG (successor to R. G. PAGE and J. C. KENNEDY), whose post office address is 23 Dover Green, Staten Island, New York 10312 (hereinafter sometimes called the Co-Trustee), parties of the second part (the Corporate Trustee and the Co-Trustee being hereinafter together sometimes called the Trustees), as Trustees under the Mortgage and Deed of Trust, dated as of July 1, 1946 (hereinafter called the Mortgage), executed and delivered by Portland Gas & Coke Company (now Northwest Natural Gas Company) to secure the payment of bonds issued or to be issued under and in accordance with the provisions of the Mortgage, this indenture (hereinafter called Eleventh Supplemental Indenture) being supplemental thereto;

WHEREAS the Mortgage was or is to be recorded in the official records of various counties in the States of Oregon and Washington which counties include or will include all counties in which this Eleventh Supplemental Indenture is to be recorded; and

WHEREAS by the Mortgage the Company covenanted that it would execute and deliver such supplemental indenture or indentures and such further instruments and do such further acts as might be necessary or proper to carry out more effectually the purposes of the Mortgage and to make subject to the lien of the Mortgage any property thereafter acquired, made or constructed and intended to be subject to the lien thereof; and

WHEREAS the Company executed and delivered to the Trustees its First Supplemental Indenture, dated as of June 1, 1949 (hereinafter called its First Supplemental Indenture), its Second Supplemental Indenture, dated as of March 1, 1954 (hereinafter called its Second Supplemental Indenture), its Third Supplemental Indenture, dated as of April 1, 1956 (hereinafter called its Third Supplemental Indenture), its Fourth Supplemental Indenture, dated as of February 1, 1959 (hereinafter called its Fourth Supple-

mental Indenture), its Fifth Supplemental Indenture, dated as of July 1, 1961 (hereinafter called its Fifth Supplemental Indenture), its Sixth Supplemental Indenture, dated as of January 1, 1964 (hereinafter called its Sixth Supplemental Indenture), its Seventh Supplemental Indenture, dated as of March 1, 1966 (hereinafter called its Seventh Supplemental Indenture), its Eighth Supplemental Indenture, dated as of December 1, 1969 (hereinafter called its Eighth Supplemental Indenture) and its Ninth Supplemental Indenture, dated as of April 1, 1971 (hereinafter called its Ninth Supplemental Indenture); and

WHEREAS said First through Ninth Supplemental Indentures were filed for record, and were recorded and indexed, as a mortgage of both real and personal property, in the official records of various counties in the States of Oregon and Washington which counties include or will include all counties in which this Eleventh Supplemental Indenture is to be recorded; and

WHEREAS the Company executed and delivered to the Trustees its Tenth Supplemental Indenture, dated as of January 1, 1975 (hereinafter called its Tenth Supplemental Indenture); and

WHEREAS said Tenth Supplemental Indenture was filed for record, and was recorded and indexed, as a mortgage of both real and personal property, and financing statements were filed, in the official records of the several counties and other offices in the States of Oregon and Washington listed below, as follows:

OREGON

Real Property Mortgage Records

<u>County</u>	<u>Date Recorded</u>	<u>Book, Film or Reel</u>	<u>Page</u>
Benton	January 27, 1975	53450	—
Clackamas	January 27, 1975	75-2101	—
Clatsop	January 27, 1975	406	698
Columbia	January 27, 1975	131	162
Coos	January 27, 1975	75 1-109240/65	—
Douglas	January 27, 1975	562	540
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Lincoln	January 28, 1975	54	970
Linn	January 27, 1975	MF 101	828
Marion	January 27, 1975	7	1849
Multnomah	January 21, 1975	1024	1415
Polk	January 27, 1975	67	212
Tillamook	January 27, 1975	239	329
Wasco	January 27, 1975	750186	26
Washington	January 28, 1975	1009	141
Yamhill	January 27, 1975	104	150

Filed as a Financing Statement

<u>Office</u>	<u>Date Filed for Record</u>	<u>File Number</u>
Secretary of State	January 28, 1975	D-05654

(An executed counterpart of the Tenth Supplemental Indenture was filed on February 12, 1975, in the office of the Auditor of the City of Portland.)

WASHINGTON

Real Property Mortgage Records

<u>County</u>	<u>Date Recorded</u>	<u>Book, Film or Reel</u>	<u>Page</u>
Clark	January 27, 1975	G 681197	943795
Klickitat	January 27, 1975	112	9
Skamania	January 27, 1975	52	420

Filed as a Financing Statement

<u>Office</u>	<u>Date Filed for Record</u>	<u>File Number</u>
Secretary of State	January 27, 1975	0282357
; and		

WHEREAS an instrument dated as of June 14, 1951, was executed by the Company appointing J. C. Kennedy as Co-Trustee in succession to said R. G. Page (resigned) under the Mortgage and by J. C. Kennedy accepting the appointment as Co-Trustee under the Mortgage in succession to the said R. G. Page, which instrument was recorded in various counties in the States of Oregon and Washington; and

WHEREAS, in the Ninth Supplemental Indenture STANLEY BURG was appointed by the Company as Co-Trustee under the Mortgage in succession to said J. C. KENNEDY (resigned) and in the Ninth Supplemental Indenture Stanley BURG accepted such appointment as Co-Trustee under the Mortgage in succession to said J. C. Kennedy; and

WHEREAS in addition to the property described in the Mortgage, as heretofore supplemented, the Company has acquired certain other property, rights and interests in property; and

WHEREAS, the Company has heretofore issued, in accordance with the provisions of the Mortgage, as supplemented, the following series of First Mortgage Bonds:

<u>Series</u>	<u>Principal Amount Outstanding</u>
3½ % Series due 1976.....	\$10,000,000
3⅞ % Series due 1974.....	None
4 % Series due 1974.....	None
4⅜ % Series due 1976.....	\$ 1,742,000
5⅛ % Series due 1984.....	\$ 4,941,000
5½ % Series due 1986.....	\$ 5,045,000
4¾ % Series due 1989.....	\$ 5,854,000
5¾ % Series due 1991.....	\$13,849,000
9⅜ % Series due 1974.....	None
8⅝ % Series due 1996.....	\$17,283,000
12 % Series due 1984.....	\$30,000,000;

and

WHEREAS Section 8 of the Mortgage provides that the form of each series of bonds (other than the First Series) issued thereunder shall be established by Resolution of the Board of Directors of the Company; that the form of such series, as established by said Board of Directors, shall specify the descriptive title of the bonds and various other terms thereof; and that such Series may also contain such provisions not inconsistent with the pro-

visions of the Mortgage as the Board of Directors may, in its discretion, cause to be inserted therein expressing or referring to the terms and conditions upon which such bonds are to be issued and/or secured under the Mortgage; and

WHEREAS Section 120 of the Mortgage provides, among other things, that any power, privilege or right expressly or impliedly reserved to or in any way conferred upon the Company by any provision of the Mortgage, whether such power, privilege or right is in any way restricted or is unrestricted, may (to the extent permitted by law) be in whole or in part waived or surrendered or subjected to any restriction if at the time unrestricted or to additional restriction if already restricted, and the Company may enter into any further covenants, limitations or restrictions for the benefit of any one or more series of bonds issued thereunder, or the Company may cure any ambiguity contained therein or in any supplemental indenture or may (in lieu of establishment by Resolution as provided in Section 8 of the Mortgage) establish the terms and provisions of any series of bonds other than said First Series, by an instrument in writing executed and acknowledged by the Company in such manner as would be necessary to entitle a conveyance of real estate to record in all of the states in which any property at the time subject to the lien of the Mortgage shall be situated; and

WHEREAS the Company now desires to create a new series of bonds and (pursuant to the provisions of Section 120 of the Mortgage) to add to its covenants and agreements contained in the Mortgage, as heretofore supplemented, certain other covenants and agreements to be observed by it and to alter and amend in certain respects the covenants and provisions contained in the Mortgage, as heretofore supplemented and amended; and

WHEREAS the execution and delivery by the Company of this Eleventh Supplemental Indenture, and the terms of the bonds of the Twelfth Series hereinafter referred to, have been duly authorized by the Board of Directors of the Company by appropriate resolutions of said Board of Directors;

NOW, THEREFORE, THIS INDENTURE WITNESSETH:

That Northwest Natural Gas Company, in consideration of the premises and of One Dollar to it duly paid by the Trustees at or before the sealing and delivery of these presents, the receipt whereof is hereby acknowledged, and in further assurance of the estate, title and rights of the Trustees, and in order further to secure the payment both of the principal of and interest and

premium, if any, on the bonds from time to time issued under the Mortgage, according to their tenor and effect, and the performance of all the provisions of the Mortgage (including any instruments supplemental thereto and any modification made as in the Mortgage provided) and of said bonds, hereby grants, bargains, sells, releases, conveys, assigns, transfers, mortgages, pledges, sets over and confirms (subject, however, to Excepted Encumbrances, as defined in Section 6 of the Mortgage) unto Stanley Burg and (to the extent of its legal capacity to hold the same for the purposes hereof) to Bankers Trust Company, as Trustees under the Mortgage, and to their successor or successors in said trust, and to said Trustees and their successors and assigns forever, all property, real, personal and mixed, acquired by the Company after the date of the Mortgage, of the kind or nature specifically mentioned in Article XXI of the Mortgage or of any other kind or nature (except any herein or in the Mortgage expressly excepted) now owned or, subject to the provisions of subsection (I) of Section 87 of the Mortgage, hereafter acquired by the Company (by purchase, consolidation, merger, donation, construction, erection or in any other way) and wheresoever situated, including (without in anywise limiting or impairing by the enumeration of the same the scope and intent of the foregoing) all lands, gas plants, by-product plants, gas holders, gas mains and pipes; all power sites, water rights, reservoirs, canals, raceways, dams, aqueducts, and all other rights or means for appropriating, conveying, storing and supplying water; all rights of way and roads; all plants for the generation of electricity by steam, water and/or other power; all power houses, street lighting systems, standards and other equipment incidental thereto, telephone, radio, television and air-conditioning systems and equipment incidental thereto, water works, water systems, steam heat and hot water plants, substations, lines, service and supply systems, bridges, culverts, tracts, ice or refrigeration plants and equipment, offices, buildings and other structures and the equipment thereof; all machinery, engines, boilers, dynamos, gas, electric and other machines, regulators, meters, transformers, generators, motors, gas, electrical and mechanical appliances, conduits, cables, gas, water, steam heat or other pipes, service pipes, fittings, valves and connections, pole and transmission lines, wires, cables, tools, implements, apparatus, furniture and chattels; all franchises, consents or permits; all lines for the transmission and distribution of gas, electric current, steam heat or water for any purpose including mains, pipes, conduits, towers, poles, wires, cables, ducts and all apparatus for use in connection therewith; all real estate, lands, easements, servitudes, licenses, permits, franchises, privileges, rights of way and other rights in or relating to public or private property, real or personal, or the

occupancy of such property and (except as herein or in the Mortgage, as heretofore supplemented, expressly excepted) all right, title and interest the Company may now have or may hereafter acquire in and to any and all property of any kind or nature wheresoever situated.

TOGETHER WITH all and singular the tenements, hereditaments, prescriptions, servitudes and appurtenances belonging or in anywise appertaining to the aforementioned property or any part thereof, with the reversion and reversions, remainder and remainders and (subject to the provisions of Section 57 of the Mortgage) the tolls, rents, revenues, issues, earnings, income, product and profits thereof, and all the estate, right, title and interest and claim whatsoever, at law as well as in equity, which the Company now has or may hereafter acquire in and to the aforementioned property and franchises and every part and parcel thereof.

IT IS HEREBY AGREED by the Company that, subject to the provisions of subsection (I) of Section 87 of the Mortgage, all the property, rights, and franchises acquired by the Company (by purchase, consolidation, merger, donation, construction, erection or in any other way) after the date hereof, except any herein or in the Mortgage, as heretofore supplemented, expressly excepted, shall be and are as fully granted and conveyed hereby and by the Mortgage, and as fully embraced within the lien hereof and the lien of the Mortgage, as supplemented, as if such property, rights and franchises were now owned by the Company and were specifically described herein or in the Mortgage, as heretofore supplemented, and conveyed hereby or thereby.

Provided that the following are not and are not intended to be now or hereafter granted, bargained, sold, released, conveyed, assigned, transferred, mortgaged, pledged, set over or confirmed hereunder and are hereby expressly excepted from the lien and operation of this Eleventh Supplemental Indenture and from the lien and operation of the Mortgage, as heretofore supplemented, viz: (1) cash, shares of stock, bonds, notes and other obligations and other securities not hereafter specifically pledged, paid, deposited, delivered or held under the Mortgage, as heretofore supplemented, or covenanted so to be; (2) merchandise, equipment, apparatus, materials or supplies held for the purpose of sale or other disposition in the usual course of business; fuel, oil and similar materials and supplies consumable in the operation of any of the properties of the Company; all aircraft, tractors, rolling stock, trolley coaches, buses, motor coaches, automobiles, motor trucks, and other vehicles and

materials and supplies held for the purpose of repairing or replacing (in whole or part) any of the same; (3) bills, notes and accounts receivable, judgments, demands and choses in action, and all contracts, leases and operating agreements not specifically pledged under the Mortgage, as heretofore supplemented, or covenanted so to be; (4) the last day of the term of any lease or leasehold which may be or become subject to the lien of the Mortgage; (5) gas, petroleum, carbon, chemicals, light oils, tar products, electric energy, steam, water, ice, and other materials or products, manufactured, stored, generated, produced, purchased or acquired by the Company for sale, distribution or use in the ordinary course of its business; all timber, minerals, mineral rights and royalties and all Natural Gas and Oil Production Property, as defined in Section 4 of the Mortgage; and (6) the Company's franchise to be a corporation; provided, however, that the property and rights expressly excepted from the lien and operation of this Eleventh Supplemental Indenture and from the lien and operation of the Mortgage, as heretofore supplemented, in the above subdivisions (2) and (3) shall (to the extent permitted by law) cease to be so excepted in the event and as of the date that either or both of the Trustees or a receiver or trustee shall enter upon and take possession of the Mortgaged and Pledged Property in the manner provided in Article XIII of the Mortgage by reason of the occurrence of a Default as defined in Section 65 thereof.

TO HAVE AND TO HOLD all such properties, real, personal and mixed, granted, bargained, sold, released, conveyed, assigned, transferred, mortgaged, pledged, set over or confirmed by the Company as aforesaid, or intended so to be, unto Stanley Burg and (to the extent of its legal capacity to hold the same for the purposes hereof) to Bankers Trust Company, as Trustees, and their successors and assigns forever.

IN TRUST NEVERTHELESS, for the same purposes and upon the same terms, trusts and conditions and subject to and with the same provisos and covenants as are set forth in the Mortgage, as heretofore supplemented, this Eleventh Supplemental Indenture being supplemental thereto.

AND IT IS HEREBY COVENANTED by the Company that all the terms, conditions, provisos, covenants and provisions contained in the Mortgage, as heretofore supplemented, shall affect and apply to the property hereinbefore described and conveyed, and to the estates, rights, obligations and duties of the Company and the Trustees and the beneficiaries of the trust with respect to said property, and to the Trustees and their successors in the trust, in the

same manner and with the same effect as if the said property had been owned by the Company at the time of the execution of the Mortgage, and had been specifically and at length described in and conveyed to said Trustees by the Mortgage as a part of the property therein stated to be conveyed.

The Company further covenants and agrees to and with the Trustees and their successors in said trust under the Mortgage, as follows:

ARTICLE I.

Twelfth Series of Bonds.

SECTION 1.01. There shall be a series of bonds designated "10½ % Series due 1986" (herein sometimes referred to as the "Twelfth Series"), each of which shall also bear the descriptive title First Mortgage Bond, and the form thereof, which shall be established by Resolution of the Board of Directors of the Company, shall contain suitable provisions with respect to the matters hereinafter in this Section specified. Bonds of the Twelfth Series shall be limited to \$20,000,000 in aggregate principal amount at any one time Outstanding except as provided in Section 16 of the Mortgage and shall mature on January 1, 1986, and shall be issued as fully registered bonds in denominations of One Thousand Dollars and, at the option of the Company, in any multiple or multiples of One Thousand Dollars (the exercise of such option to be evidenced by the execution and delivery thereof); they shall bear interest at the rate of 10½ % per annum, the first interest payment to be made on July 1, 1976, for the period from December 11, 1975, to July 1, 1976, with subsequent interest payments to be made semi-annually on July 1 and January 1 of each year; and the principal of, premium, if any, and interest on each said bond shall be payable at the office or agency of the Company in the Borough of Manhattan, The City of New York, in such coin or currency of the United States of America as at the time of payment is legal tender for public and private debts. Bonds of the Twelfth Series shall be dated as in Section 10 of the Mortgage provided.

(I) Bonds of the Twelfth Series shall be redeemable either at the option of the Company or pursuant to the requirements of the Mortgage in whole at any time, or in part from time to time, prior to maturity, upon notice, as provided in Section 52 of the Mortgage, mailed at least thirty (30) days prior

to the date fixed for redemption, at the following general redemption prices, expressed in percentages of the principal amount of the bonds to be redeemed:

GENERAL REDEMPTION PRICES

If redeemed prior to January 1, 1977, 110.50% and if redeemed during the 12 months period ending December 31,

1977	109.19%	1982	102.63%
1978	107.88%	1983	101.31%
1979	106.56%	1984	100.00%
1980	105.25%	1985	100.00%
1981	103.94%		

in each case, together with accrued interest to the date fixed for redemption; provided, however, that no bonds of the Twelfth Series may be redeemed pursuant to this subdivision (I) prior to December 1, 1983, as part of any refunding operation involving, directly or indirectly, the incurring of indebtedness by the Company having a cost (calculated in accordance with acceptable financial practice) lower than 10.50% per annum.

(II) Bonds of the Twelfth Series shall also be redeemable in whole at any time, or in part from time to time, prior to maturity, upon like notice, by the application (either at the option of the Company or pursuant to the requirements of the Mortgage) of cash deposited with the Corporate Trustee pursuant to the provisions of Section 39 or (so long as any bonds of the First, Fourth, Fifth, Sixth, Seventh, Eighth, Tenth or Eleventh Series remain Outstanding) Section 64 of the Mortgage or with the Proceeds of Released Property, at the following special redemption prices, expressed in percentages of the principal amount of the bonds to be redeemed:

SPECIAL REDEMPTION PRICES

If redeemed prior to January 1, 1977, 100.00% and if redeemed during the 12 months period ending December 31,

1977	100.00%	1982	100.00%
1978	100.00%	1983	100.00%
1979	100.00%	1984	100.00%
1980	100.00%	1985	100.00%
1981	100.00%		

in each case, together with accrued interest to the date fixed for redemption.

ARTICLE II.

Exchanges and Transfers of Bonds of the Twelfth Series.

SECTION 2.01. At the option of the registered owner, any bonds of the Twelfth Series, upon surrender thereof, for cancellation, at the office or agency of the Company in the Borough of Manhattan, The City of New York, shall (subject to the provisions of Section 12 of the Mortgage) be exchangeable for a like aggregate principal amount of bonds of the same series of other authorized denominations.

Transfers of bonds of the Twelfth Series may be registered (subject to the provisions of Section 12 of the Mortgage) at the office or agency of the Company in the Borough of Manhattan, The City of New York or such other locations as the Company may designate from time to time.

Upon any registration of transfer or exchange of bonds of the Twelfth Series, the Company may make a charge therefor sufficient to reimburse it for any tax or taxes or other governmental charge, as provided in Section 12 of the Mortgage, but the Company hereby waives any right to make a charge in addition thereto for any registration or exchange or transfer of bonds of the Twelfth Series.

ARTICLE III.

Miscellaneous Provisions.

SECTION 3.01. The Corporate Trustee may, from time to time, appoint an authenticating agent or agents to act on its behalf and subject to its direction in connection with the authentication of bonds issued from time to time in fully registered form under the Mortgage as heretofore or hereafter amended or supplemented. Any such authenticating agent shall, so long as it so acts hereunder, be a bank or trust company and be a corporation organized and doing business under the laws of the United States or of any State or Territory or of the District of Columbia, with a combined capital and surplus of at least Five Million Dollars (\$5,000,000), and be authorized under such laws to act as authenticating agent and be subject to supervision or examination by Federal, State, Territorial, or District of Columbia authority. If such corporation publishes reports of condition at least annually, pursuant to law or to the requirements of the aforesaid supervising or examining authority, then for the purposes of this Section the combined capital and surplus of such corporation shall be deemed to be its combined capital and surplus as set forth in its most recent report of condition so published.

Any corporation into which any authenticating agent may be merged or converted or with which it may be consolidated, of any corporation resulting from any merger, conversion or consolidation to which any authenticating agent shall be a party, or any corporation succeeding to the corporate agency business of any authenticating agent, shall, if otherwise eligible under the provisions of this Section, continue to be an authenticating agent without the execution or filing of any paper or any further act on the part of the Corporate Trustee or the predecessor authenticating agent.

Any authenticating agent may at any time resign by giving written notice of resignation to the Corporate Trustee and to the Company. The Corporate Trustee may at any time terminate the agency of any authenticating agent by giving written notice of termination to such authenticating agent and to the Company. Any successor authenticating agent upon acceptance of its appointment hereunder shall become vested with all the rights, powers, duties and responsibilities of its predecessor hereunder, with like effect as if originally named as an authenticating agent herein. No successor authenticating agent shall be appointed unless eligible under the provisions of this Section.

The Corporate Trustee agrees to pay to any authenticating agent from time to time reasonable compensation for its services, and the Corporate Trustee shall be entitled to be reimbursed for such payments, and be entitled to the benefits of Section 96 of the Mortgage, with respect thereto.

SECTION 3.02. When all bonds of the First, Fourth, Fifth, Sixth, Seventh, Eighth, Tenth and Eleventh Series are no longer Outstanding, Section 64 shall be excised from the Mortgage.

SECTION 3.03. Subject to the amendments provided for in this Eleventh Supplemental Indenture, the terms defined in the Mortgage, as heretofore supplemented, shall, for all purposes of this Eleventh Supplemental Indenture, have the meanings specified in the Mortgage, as heretofore supplemented.

SECTION 3.04. The Trustees hereby accept the trusts hereby declared provided, created or supplemented, and agree to perform the same upon the terms and conditions herein and in the Mortgage, as heretofore supplemented, set forth, including the following:

The Trustees shall not be responsible in any manner whatsoever for or in respect of the validity or sufficiency of this Eleventh Supplemental Indenture or for or in respect of the recitals contained herein, all of which recitals

are made by the Company solely. In general each and every term and condition contained in Article XVII of the Mortgage shall apply to and form part of this Eleventh Supplemental Indenture with the same force and effect as if the same were herein set forth in full, with such omissions, variations and insertions, if any, as may be appropriate to make the same conform to the provisions of the Eleventh Supplemental Indenture.

SECTION 3.05. Whenever in this Eleventh Supplemental Indenture any of the parties hereto is named or referred to, this shall, subject to the provisions of Articles XVI and XVII of the Mortgage, be deemed to include the successors or assigns of such party, and all the covenants and agreements in this Eleventh Supplemental Indenture contained by or on behalf of the Company or by or on behalf of the Trustees shall bind and inure to the benefit of the respective successors and assigns of such parties whether so expressed or not.

SECTION 3.06. Nothing in this Eleventh Supplemental Indenture, expressed or implied, is intended, or shall be construed, to confer upon, or to give to, any person, firm or corporation, other than the parties hereto and the holders of the bonds and coupons outstanding under the Mortgage, any right, remedy, or claim under or by reason of this Eleventh Supplemental Indenture or any covenant, condition, stipulation, promise or agreement hereof, and all the covenants, conditions, stipulations, promises and agreements by or on behalf of the Company as set forth in this Eleventh Supplemental Indenture shall be for the sole and exclusive benefit of the parties hereto, and of the holders of the bonds and of the coupons outstanding under the Mortgage.

SECTION 3.07. This Eleventh Supplemental Indenture has been executed in several identical counterparts, each of which shall be an original and all of which shall constitute but one and the same instrument.

IN WITNESS WHEREOF, Northwest Natural Gas Company, party hereto of the first part, has caused its corporate name to be hereunto affixed, and this instrument to be signed and sealed by its President or one of its Vice Presidents, and its corporate seal to be attested by its Secretary or one of its Assistant Secretaries for and in its behalf on the 3rd day of December, 1975, as of December 1, 1975, in The City of New York; Bankers Trust Company, one of the parties hereto of the second part, has caused its corporate name to be hereunto affixed, and this instrument to be signed and sealed by one of its Vice Presidents or one of its Assistant Vice Presidents and its

corporate seal to be attested by one of its Assistant Secretaries; and Stanley Burg, one of the parties hereto of the second part, has hereunto set his hand and affixed his seal, all in The City of New York, on the 3rd day of December, 1975, as of December 1, 1975.

NORTHWEST NATURAL GAS COMPANY

By
President.

Attest:

.....
Secretary.

Executed, sealed and delivered by NORTHWEST
NATURAL GAS COMPANY in the presence of:

.....
.....

BANKERS TRUST COMPANY, as Trustee,

By
Assistant Vice President.

Attest:

.....
Assistant Secretary.

.....
STANLEY BURG, as Trustee.

Executed, sealed and delivered by BANKERS
TRUST COMPANY and STANLEY BURG in
the presence of:

.....
.....

STATE OF NEW YORK }
COUNTY OF NEW YORK } ss.:

December 3, A.D. 1975.

Before me personally appeared RONALD T. MILLER, who, being duly sworn, did say that he is President of NORTHWEST NATURAL GAS COMPANY and that the seal affixed to the foregoing instrument is the corporate seal of said Corporation and that said instrument was signed and sealed in behalf of said Corporation by authority of its Board of Directors; and he acknowledged said instrument to be its voluntary act and deed.

On this 3rd day of December, 1975, before me personally appeared RONALD T. MILLER, to me known to be President of NORTHWEST NATURAL GAS COMPANY, one of the corporations that executed the within and foregoing instrument, and acknowledged said instrument to be the free and voluntary act and deed of said Corporation, for the uses and purposes therein mentioned, and on oath stated that he was authorized to execute said instrument and that the seal affixed is the corporate seal of said Corporation.

IN WITNESS WHEREOF I have hereunto set my hand and affixed my official seal the day and year first above written.

.....
MORTON BARAD
Notary Public, State of New York
No. 41-5170980
Certs. filed in Bronx, Kings, Nassau,
New York, and Westchester Cos.
Qualified in Queens County
Commission Expires March 30, 1976

STATE OF NEW YORK }
COUNTY OF NEW YORK } ss.:

December 3, A. D. 1975.

Before me personally appeared ROMANO I. PELUSO, who, being duly sworn, did say that he is an Assistant Vice President of BANKERS TRUST COMPANY and that the seal affixed to the foregoing instrument is the corporate seal of said Corporation and that said instrument was signed and sealed in behalf of said Corporation by authority of its Board of Directors; and he acknowledged said instrument to be its voluntary act and deed.

On this 3rd day of December, 1975, before me personally appeared ROMANO I. PELUSO, to me known to be an Assistant Vice President of BANKERS TRUST COMPANY, one of the corporations that executed the within and foregoing instrument, and acknowledged said instrument to be the free and voluntary act and deed of said Corporation, for the uses and purposes therein mentioned, and on oath stated that he was authorized to execute said instrument and that the seal affixed is the corporate seal of said Corporation.

IN WITNESS WHEREOF I have hereunto set my hand and affixed my official seal the day and year first above written.

.....
LYLE TEMPLE
Notary Public, State of New York
No. 30-3948960
Qualified in Nassau County
Certificate filed in New York County
Commission Expires March 30, 1977

STATE OF NEW YORK }
COUNTY OF NEW YORK } ss.:

December 3, A. D. 1975.

Before me personally appeared the above-named STANLEY BURG and acknowledged the foregoing instrument to be his voluntary act and deed.

On this day personally appeared before me STANLEY BURG to me known to be the individual described in and who executed the within and foregoing instrument, and acknowledged that he signed the same as his free and voluntary act and deed, for the uses and purposes therein mentioned.

Given under my hand and official seal this 3rd day of December, 1975.

.....

LYLE TEMPLE
Notary Public, State of New York
No. 30-3948960
Qualified in Nassau County
Certificate filed in New York County
Commission Expires March 30, 1977

NORTHWEST NATURAL GAS COMPANY

TO

BANKERS TRUST COMPANY

AND

STANLEY BURG

(SUCCESSOR TO R. G. PAGE AND J. C. KENNEDY),

**As Trustees under the Mortgage and Deed of
Trust, dated as of July 1, 1946, of Portland
Gas & Coke Company (now Northwest Natu-
ral Gas Company)**

TWELFTH SUPPLEMENTAL INDENTURE

**providing among other things for
First Mortgage Bonds, 14¾% Series due 1989**

Dated as of July 1, 1981

TWELFTH SUPPLEMENTAL INDENTURE

INDENTURE, dated as of the 1st day of July, 1981, made and entered into by and between NORTHWEST NATURAL GAS COMPANY (formerly Portland Gas & Coke Company), a corporation of the State of Oregon, whose post office address is Suite 1900, 200 S.W. Market Street, Portland, Oregon 97201 (hereinafter sometimes called the Company), party of the first part, and BANKERS TRUST COMPANY, a corporation of the State of New York, whose post office address is One Bankers Trust Plaza, New York, New York 10005 (hereinafter sometimes called the Corporate Trustee) and STANLEY BURG (successor to R. G. PAGE and J. C. KENNEDY), whose post office address is 23 Dover Green, Staten Island, New York 10312 (hereinafter sometimes called the Co-Trustee), parties of the second part (the Corporate Trustee and the Co-Trustee being hereinafter together sometimes called the Trustees), as Trustees under the Mortgage and Deed of Trust, dated as of July 1, 1946 (hereinafter called the Mortgage), executed and delivered by Portland Gas & Coke Company (now Northwest Natural Gas Company) to secure the payment of bonds issued or to be issued under and in accordance with the provisions of the Mortgage, this indenture (hereinafter called Twelfth Supplemental Indenture) being supplemental thereto;

WHEREAS the Mortgage was or is to be recorded in the official records of various counties in the States of Oregon and Washington which counties include or will include all counties in which this Twelfth Supplemental Indenture is to be recorded; and

WHEREAS by the Mortgage the Company covenanted that it would execute and deliver such supplemental indenture or indentures and such further instruments and do such further acts as might be necessary or proper to carry out more effectually the purposes of the Mortgage and to make subject to the lien of the Mortgage any property thereafter acquired, made or constructed and intended to be subject to the lien thereof; and

WHEREAS the Company executed and delivered to the Trustees its First Supplemental Indenture, dated as of June 1, 1949 (hereinafter called its First Supplemental Indenture), its Second Supplemental Indenture, dated as of March 1, 1954 (hereinafter called its Second Supplemental Indenture), its Third Supplemental Indenture, dated as of April 1, 1956 (hereinafter called its Third Supplemental Indenture), its Fourth Supplemental Indenture, dated as of February 1, 1959 (hereinafter called its Fourth Supplemental

Indenture), its Fifth Supplemental Indenture, dated as of July 1, 1961 (hereinafter called its Fifth Supplemental Indenture), its Sixth Supplemental Indenture, dated as of January 1, 1964 (hereinafter called its Sixth Supplemental Indenture), its Seventh Supplemental Indenture, dated as of March 1, 1966 (hereinafter called its Seventh Supplemental Indenture), its Eighth Supplemental Indenture, dated as of December 1, 1969 (hereinafter called its Eighth Supplemental Indenture), its Ninth Supplemental Indenture, dated as of April 1, 1971 (hereinafter called its Ninth Supplemental Indenture) and its Tenth Supplemental Indenture, dated as of January 1, 1975 (hereinafter called its Tenth Supplemental Indenture); and

WHEREAS said First through Tenth Supplemental Indentures were filed for record, and were recorded and indexed, as a mortgage of both real and personal property, in the official records of various counties in the States of Oregon and Washington which counties include or will include all counties in which this Twelfth Supplemental Indenture is to be recorded; and

WHEREAS the Company executed and delivered to the Trustees its Eleventh Supplemental Indenture, dated as of December 1, 1975 (hereinafter called its Eleventh Supplemental Indenture); and

WHEREAS said Eleventh Supplemental Indenture was filed for record, and was recorded and indexed, as a mortgage of both real and personal property, and financing statements were filed, in the official records of the several counties and other offices in the States of Oregon and Washington listed below, as follows:

Oregon			
Real Property Mortgage Records			
<u>County</u>	<u>Date Recorded</u>	<u>Book, Film or Reel</u>	<u>Page</u>
Benton	December 12, 1975	61642	—
Clackamas	December 12, 1975	75-36719	—
Clatsop	December 12, 1975	421	724
Columbia	December 12, 1975	135	384
Coos	December 15, 1975	75-12	444
Douglas	December 15, 1975	588	45
Hood River	December 12, 1975	752480	—

<u>County</u>	<u>Date Recorded</u>	<u>Book, Film or Reel</u>	<u>Page</u>
Lane.....	December 15, 1975	R-773	—
Lincoln	December 16, 1975	61	804
Linn	December 12, 1975	123	657
Marion.....	December 12, 1975	R-31	1714
Multnomah.....	December 12, 1975	1077	803
Polk.....	December 12, 1975	80	675
Tillamook	December 12, 1975	243	227
Wasco	December 12, 1975	752912	—
Washington	December 12, 1975	1058	710
Yamhill.....	December 12, 1975	109	1101

Filed as a Financing Statement

<u>Office</u>	<u>Date Filed for Record</u>	<u>File Number</u>
Secretary of State	December 15, 1975	D-30958

Washington

Real Property Mortgage Records

<u>County</u>	<u>Date Recorded</u>	<u>Book, Film or Reel</u>	<u>Page</u>
Clark	December 12, 1975	G 708683	985932
Klickitat	December 15, 1975	113	461
Skamania	December 12, 1975	53	31

Filed as a Financing Statement

<u>Office</u>	<u>Date Filed for Record</u>	<u>File Number</u>
Secretary of State	December 15, 1975	0321966

; and

WHEREAS an instrument dated as of June 14, 1951, was executed by the Company appointing J. C. KENNEDY as Co-Trustee in succession to said R. G. PAGE (resigned) under the Mortgage and by J. C. KENNEDY accepting the appointment as Co-Trustee under the Mortgage in succession to the said R. G. PAGE, which instrument was recorded in various counties in the States of Oregon and Washington; and

WHEREAS in the Ninth Supplemental Indenture STANLEY BURG was appointed by the Company as Co-Trustee under the Mortgage in succession to said J. C. KENNEDY (resigned) and in the Ninth Supplemental Indenture

STANLEY BURG accepted such appointment as Co-Trustee under the Mortgage in succession to said J. C. KENNEDY; and

WHEREAS in addition to the property described in the Mortgage, as heretofore supplemented, the Company has acquired certain other property, rights and interests in property; and

WHEREAS the Company has heretofore issued, in accordance with the provisions of the Mortgage, as supplemented, the following series of First Mortgage Bonds:

<u>Series</u>	<u>Principal Amount Outstanding</u>
3¼% Series due 1976	None
3¾% Series due 1974	None
4 % Series due 1974	None
4¾% Series due 1976	None
5¼% Series due 1984	\$ 4,941,000 4,279,000
5¾% Series due 1986	\$ 5,045,000 4,233,000
4¾% Series due 1989	\$ 5,854,000 4,970,000
5¾% Series due 1991	\$12,849,000 11,828,000
9¾% Series due 1974	None
8¾% Series due 1996	\$17,283,000 15,049,000
12 % Series due 1984	\$21,000,000
10½% Series due 1986	\$20,000,000

; and

WHEREAS Section 8 of the Mortgage provides that the form of each series of bonds (other than the First Series) issued thereunder shall be established by Resolution of the Board of Directors of the Company; that the form of such series, as established by said Board of Directors, shall specify the descriptive title of the bonds and various other terms thereof; and that such Series may also contain such provisions not inconsistent with the provisions of the Mortgage as the Board of Directors may, in its discretion, cause to be inserted therein expressing or referring to the terms and conditions upon which such bonds are to be issued and/or secured under the Mortgage; and

WHEREAS Section 120 of the Mortgage provides, among other things, that any power, privilege or right expressly or impliedly reserved to or in any

way conferred upon the Company by any provision of the Mortgage, whether such power, privilege or right is in any way restricted or is unrestricted, may (to the extent permitted by law) be in whole or in part waived or surrendered or subjected to any restriction if at the time unrestricted or to additional restriction if already restricted, and the Company may enter into any further covenants, limitations or restrictions for the benefit of any one or more series of bonds issued thereunder, or the Company may cure any ambiguity contained therein or in any supplemental indenture or may (in lieu of establishment by Resolution as provided in Section 8 of the Mortgage) establish the terms and provisions of any series of bonds other than said First Series, by an instrument in writing executed and acknowledged by the Company in such manner as would be necessary to entitle a conveyance of real estate to record in all of the states in which any property at the time subject to the lien of the Mortgage shall be situated; and

WHEREAS the Company now desires to create a new series of bonds and (pursuant to the provisions of Section 120 of the Mortgage) to add to its covenants and agreements contained in the Mortgage, as heretofore supplemented, certain other covenants and agreements to be observed by it and to alter and amend in certain respects the covenants and provisions contained in the Mortgage, as heretofore supplemented and amended; and

WHEREAS the execution and delivery by the Company of this Twelfth Supplemental Indenture, and the terms of the bonds of the Thirteenth Series hereinafter referred to, have been duly authorized by the Board of Directors of the Company by appropriate resolutions of said Board of Directors;

NOW, THEREFORE, THIS INDENTURE WITNESSETH:

That Northwest Natural Gas Company, in consideration of the premises and of One Dollar to it duly paid by the Trustees at or before the ensealing and delivery of these presents, the receipt whereof is hereby acknowledged, and in further assurance of the estate, title and rights of the Trustees, and in order further to secure the payment both of the principal of and interest and premium, if any, on the bonds from time to time issued under the Mortgage, according to their tenor and effect, and the performance of all the provisions of the Mortgage (including any instruments supplemental thereto and any modification made as in the Mortgage provided) and of said bonds, hereby grants, bargains, sells, releases,

conveys, assigns, transfers, mortgages, pledges, sets over and confirms (subject, however, to Excepted Encumbrances, as defined in Section 6 of the Mortgage) unto Stanley Burg and (to the extent of its legal capacity to hold the same for the purposes hereof) to Bankers Trust Company, as Trustees under the Mortgage, and to their successor or successors in said trust, and to said Trustees and their successors and assigns forever, all property, real, personal and mixed, acquired by the Company after the date of the Mortgage, of the kind or nature specifically mentioned in Article XXI of the Mortgage or of any other kind or nature (except any herein or in the Mortgage expressly excepted) now owned or, subject to the provisions of subsection (I) of Section 87 of the Mortgage, hereafter acquired by the Company (by purchase, consolidation, merger, donation, construction, erection or in any other way) and wheresoever situated, including (without in anywise limiting or impairing by the enumeration of the same the scope and intent of the foregoing) all lands, gas plants, by-product plants, gas holders, gas mains and pipes; all power sites, water rights, reservoirs, canals, raceways, dams, aqueducts, and all other rights or means for appropriating, conveying, storing and supplying water; all rights of way and roads; all plants for the generation of electricity by steam, water and/or other power; all power houses, street lighting systems, standards and other equipment incidental thereto, telephone, radio, television and air-conditioning systems and equipment incidental thereto, water works, water systems, steam heat and hot water plants, substations, lines, service and supply systems, bridges, culverts, tracts, ice or refrigeration plants and equipment, offices, buildings and other structures and the equipment thereof; all machinery, engines, boilers, dynamos, gas, electric and other machines, regulators, meters, transformers, generators, motors, gas, electrical and mechanical appliances, conduits, cables, gas, water, steam heat or other pipes, service pipes, fittings, valves and connections, pole and transmission lines, wires, cables, tools, implements, apparatus, furniture and chattels; all franchises, consents or permits; all lines for the transmission and distribution of gas, electric current, steam heat or water for any purpose including mains, pipes, conduits, towers, poles, wires, cables, ducts and all apparatus for use in connection therewith; all real estate, lands, easements, servitudes, licenses, permits, franchises, privileges, rights of way and other rights in or relating to public or private property, real or personal, or the occupancy of such property and (except as herein or in the Mortgage, as heretofore supplemented, expressly excepted) all right, title and interest the Company may now have or may

hereafter acquire in and to any and all property of any kind or nature wheresoever situated.

TOGETHER WITH all and singular the tenements, hereditaments, prescriptions, servitudes and appurtenances belonging or in anywise appertaining to the aforementioned property or any part thereof, with the reversion and reversions, remainder and remainders and (subject to the provisions of Section 57 of the Mortgage) the tolls, rents, revenues, issues, earnings, income, product and profits thereof, and all the estate, right, title and interest and claim whatsoever, at law as well as in equity, which the Company now has or may hereafter acquire in and to the aforementioned property and franchises and every part and parcel thereof.

IT IS HEREBY AGREED by the Company that, subject to the provisions of subsection (I) of Section 87 of the Mortgage, all the property, rights, and franchises acquired by the Company (by purchase, consolidation, merger, donation, construction, erection or in any other way) after the date hereof, except any herein or in the Mortgage, as heretofore supplemented, expressly excepted, shall be and are as fully granted and conveyed hereby and by the Mortgage, and as fully embraced within the lien hereof and the lien of the Mortgage, as supplemented, as if such property, rights and franchises were now owned by the Company and were specifically described herein or in the Mortgage, as heretofore supplemented, and conveyed hereby or thereby.

Provided that the following are not and are not intended to be now or hereafter granted, bargained, sold, released, conveyed, assigned, transferred, mortgaged, pledged, set over or confirmed hereunder and are hereby expressly excepted from the lien and operation of this Twelfth Supplemental Indenture and from the lien and operation of the Mortgage, as heretofore supplemented, viz: (1) cash, shares of stock, bonds, notes and other obligations and other securities not hereafter specifically pledged, paid, deposited, delivered or held under the Mortgage, as heretofore supplemented, or covenanted so to be; (2) merchandise, equipment, apparatus, materials or supplies held for the purpose of sale or other disposition in the usual course of business; fuel, oil and similar materials and supplies consumable in the operation of any of the properties of the Company; all aircraft, tractors, rolling stock, trolley coaches, buses, motor coaches, automobiles, motor trucks, and other vehicles and materials and supplies held for the purpose of repairing or replacing (in whole or in part) any of the same; (3) bills, notes and accounts receivable, judgments, demands and

choses in action, and all contracts, leases and operating agreements not specifically pledged under the Mortgage, as heretofore supplemented, or covenanted so to be; (4) the last day of the term of any lease or leasehold which may be or become subject to the lien of the Mortgage; (5) gas, petroleum, carbon, chemicals, light oils, tar products, electric energy, steam, water, ice, and other materials or products, manufactured, stored, generated, produced, purchased or acquired by the Company for sale, distribution or use in the ordinary course of its business; all timber, minerals, mineral rights and royalties and all Natural Gas and Oil Production Property, as defined in Section 4 of the Mortgage; and (6) the Company's franchise to be a corporation; provided, however, that the property and rights expressly excepted from the lien and operation of this Twelfth Supplemental Indenture and from the lien and operation of the Mortgage, as heretofore supplemented, in the above subdivisions (2) and (3) shall (to the extent permitted by law) cease to be so excepted in the event and as of the date that either or both of the Trustees or a receiver or trustee shall enter upon and take possession of the Mortgaged and Pledged Property in the manner provided in Article XIII of the Mortgage by reason of the occurrence of a Default as defined in Section 65 thereof.

TO HAVE AND TO HOLD all such properties, real, personal and mixed, granted, bargained, sold, released, conveyed, assigned, transferred, mortgaged, pledged, set over or confirmed by the Company as aforesaid, or intended so to be, unto Stanley Burg and (to the extent of its legal capacity to hold the same for the purposes hereof) to Bankers Trust Company, as Trustees, and their successors and assigns forever.

IN TRUST NEVERTHELESS, for the same purposes and upon the same terms, trusts and conditions and subject to and with the same provisos and covenants as are set forth in the Mortgage, as heretofore supplemented, this Twelfth Supplemental Indenture being supplemental thereto.

AND IT IS HEREBY COVENANTED by the Company that all the terms, conditions, provisos, covenants and provisions contained in the Mortgage, as heretofore supplemented, shall affect and apply to the property hereinbefore described and conveyed, and to the estates, rights, obligations and duties of the Company and the Trustees and the beneficiaries of the trust with respect to said property, and to the Trustees and their successors in the trust, in the same manner and with the same effect as if the said property had been owned by the Company at the time of the execution of the Mortgage, and

had been specifically and at length described in and conveyed to said Trustees by the Mortgage as a part of the property therein stated to be conveyed.

The Company further covenants and agrees to and with the Trustees and their successors in said trust under the Mortgage, as follows:

ARTICLE I.

Thirteenth Series of Bonds.

SECTION 1.01. There shall be a series of bonds designated "14 $\frac{1}{4}$ % Series due 1989" (herein sometimes referred to as the "Thirteenth Series"), each of which shall also bear the descriptive title First Mortgage Bond, and the form thereof, which shall be established by Resolution of the Board of Directors of the Company, shall contain suitable provisions with respect to the matters hereinafter in this Section specified. Bonds of the Thirteenth Series shall be limited to \$30,000,000 in aggregate principal amount at any one time Outstanding except as provided in Section 16 of the Mortgage and shall mature on July 1, 1989, and shall be issued as fully registered bonds in denominations of One Thousand Dollars and, at the option of the Company, in any multiple or multiples of One Thousand Dollars (the exercise of such option to be evidenced by the execution and delivery thereof). Bonds of the Thirteenth Series shall bear interest at the rate of 14 $\frac{1}{4}$ % per annum, the first interest payment to be made on January 1, 1982 for the period from the date of first authentication by the Corporate Trustee of Bonds of the Thirteenth Series to January 1, 1982, with subsequent interest payments to be made semi-annually on January 1 and July 1 of each year; and the principal of, premium, if any, and interest on each said bond shall be payable at the office or agency of the Company in the Borough of Manhattan, The City of New York, in such coin or currency of the United States of America as at the time of payment is legal tender for public and private debts. Bonds of the Thirteenth Series shall be dated as in Section 10 of the Mortgage provided.

Bonds of the Thirteenth Series shall not be redeemable prior to July 1, 1986. On and after July 1, 1986, bonds of the Thirteenth Series shall be redeemable either at the option of the Company or pursuant to the requirements of the Mortgage in whole at any time, or in part from time to time, prior to maturity, upon notice, as provided in Section 52 of the

Mortgage, mailed at least thirty (30) days prior to the date fixed for redemption, at the following redemption prices, expressed in percentages of the principal amount of the bonds to be redeemed:

If redeemed on or after July 1, 1986 and on or before July 1, 1987.....
104.22%

If redeemed after July 1, 1987 and on or before July 1, 1988.....
102.11%

If redeemed after July 1, 1988..... 100.00%
; in each case together with accrued interest to the date fixed for redemption.

ARTICLE II.

Exchanges and Transfers of Bonds of the Thirteenth Series.

SECTION 2.01. At the option of the registered owner, any bonds of the Thirteenth Series, upon surrender thereof, for cancellation, at the office or agency of the Company in the Borough of Manhattan, The City of New York, shall (subject to the provisions of Section 12 of the Mortgage) be exchangeable for a like aggregate principal amount of bonds of the same series of other authorized denominations.

Transfers of bonds of the Thirteenth Series may be registered (subject to the provisions of Section 12 of the Mortgage) at the office or agency of the Company in the Borough of Manhattan, The City of New York or such other locations as the Company may designate from time to time.

Upon any registration of transfer or exchange of bonds of the Thirteenth Series, the Company may make a charge therefor sufficient to reimburse it for any tax or taxes required to be paid solely by virtue of such transfer by the Company, as provided in Section 12 of the Mortgage, but the Company hereby waives any right to make a charge in addition thereto for any registration or exchange or transfer of bonds of the Thirteenth Series.

ARTICLE III.

Miscellaneous Provisions.

SECTION 3.01. Subject to the amendments provided for in this Twelfth Supplemental Indenture, the terms defined in the Mortgage, as heretofore supplemented, shall, for all purposes of this Twelfth Supplemental In-

denture, have the meanings specified in the Mortgage, as heretofore supplemented.

SECTION 3.02. The Trustees hereby accept the trusts hereby declared, provided, created or supplemented, and agree to perform the same upon the terms and conditions herein and in the Mortgage, as heretofore supplemented, set forth, including the following:

The Trustees shall not be responsible in any manner whatsoever for or in respect of the validity or sufficiency of this Twelfth Supplemental Indenture or for or in respect of the recitals contained herein, all of which recitals are made by the Company solely. In general each and every term and condition contained in Article XVII of the Mortgage shall apply to and form part of this Twelfth Supplemental Indenture with the same force and effect as if the same were herein set forth in full, with such omissions, variations and insertions, if any, as may be appropriate to make the same conform to the provisions of the Twelfth Supplemental Indenture.

SECTION 3.03. Whenever in this Twelfth Supplemental Indenture any of the parties hereto is named or referred to, this shall, subject to the provisions of Articles XVI and XVII of the Mortgage, be deemed to include the successors or assigns of such party, and all the covenants and agreements in this Twelfth Supplemental Indenture contained by or on behalf of the Company or by or on behalf of the Trustees shall bind and inure to the benefit of the respective successors and assigns of such parties whether so expressed or not.

SECTION 3.04. Nothing in this Twelfth Supplemental Indenture, expressed or implied, is intended, or shall be construed, to confer upon, or to give to, any person, firm or corporation, other than the parties hereto and the holders of the bonds and coupons outstanding under the Mortgage, any right, remedy, or claim under or by reason of this Twelfth Supplemental Indenture or any covenant, condition, stipulation, promise or agreement hereof, and all the covenants, conditions, stipulations, promises and agreements by or on behalf of the Company as set forth in this Twelfth Supplemental Indenture shall be for the sole and exclusive benefit of the parties hereto, and of the holders of the bonds and of the coupons outstanding under the Mortgage.

SECTION 3.05. This Twelfth Supplemental Indenture has been executed in several identical counterparts, each of which shall be an original and all of which shall constitute but one and the same instrument.

IN WITNESS WHEREOF, Northwest Natural Gas Company, party hereto of the first part, has caused its corporate name to be hereunto affixed, and this instrument to be signed and sealed by its President or one of its Vice Presidents, and its corporate seal to be attested by its Secretary or one of its Assistant Secretaries for and in its behalf on the 6th day of July 1981, as of July 1, 1981, in Portland, Oregon; Bankers Trust Company, one of the parties hereto of the second part, has caused its corporate name to be hereunto affixed, and this instrument to be signed and sealed by one of its Vice Presidents or one of its Assistant Vice Presidents and its corporate seal to be attested by one of its Assistant Secretaries; and Stanley Burg, one of the parties hereto of the second part, has hereunto set his hand and affixed his seal, all in The City of New York, on the 3rd day of July 1981, as of July 1, 1981.

NORTHWEST NATURAL GAS
COMPANY

By *Ronald W. Miller*
President

Attest:

Mike Rapson
Secretary

Executed, sealed and delivered by NORTHWEST
NATURAL GAS COMPANY in the presence of:

Quintin R. Williams
C. J. Lee

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BANKERS TRUST COMPANY,
as Trustee,

By Carl H. Lewis
Assistant Vice President

Attest:

[Signature]
Assistant Secretary

STANLEY BURG, as Trustee

By BANKERS TRUST COMPANY
Attorney-in-fact

By [Signature]
Assistant Secretary

Executed, sealed and delivered by BANKERS TRUST
COMPANY for itself and on behalf of STANLEY BURG
in the presence of:

H. M. Decker
P. A. Schuyman

STATE OF OREGON }
COUNTY OF MULTNOMAH } ss.:

July 6, A.D. 1981.

Before me personally appeared RONALD T. MILLER, who, being duly sworn, did say that he is President of NORTHWEST NATURAL GAS COMPANY and that the seal affixed to the foregoing instrument is the corporate seal of said Corporation and that said instrument was signed and sealed in behalf of said Corporation by authority of its Board of Directors; and he acknowledged said instrument to be its voluntary act and deed.

On this 6th day of July, 1981, before me personally appeared RONALD T. MILLER, to me known to be President of NORTHWEST NATURAL GAS COMPANY, one of the corporations that executed the within and foregoing instrument, and acknowledged said instrument to be the free and voluntary act and deed of said Corporation, for the uses and purposes therein mentioned, and on oath stated that he was authorized to execute said instrument and that the seal affixed is the corporate seal of said Corporation.

IN WITNESS WHEREOF I have hereunto set my hand and affixed my official seal the day and year first above written.



.....
H. W. PIERCE
Notary Public, State of Oregon
My Commission Expires 11/24/81

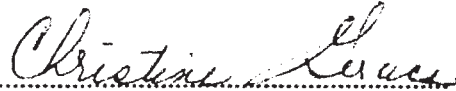
STATE OF NEW YORK }
COUNTY OF NEW YORK } ss.:

July 3, A.D. 1981.

Before me personally appeared **CARL H. NASIB**, who, being duly sworn, did say that he is an Assistant Vice President of **BANKERS TRUST COMPANY** and that the seal affixed to the foregoing instrument is the corporate seal of said Corporation and that said instrument was signed and sealed in behalf of said Corporation by authority of its Board of Directors; and he acknowledged said instrument to be its voluntary act and deed.

On this 3rd day of July, 1981, before me personally appeared **CARL H. NASIB**, to me known to be an Assistant Vice President of **BANKERS TRUST COMPANY**, one of the corporations that executed the within and foregoing instrument, and acknowledged said instrument to be the free and voluntary act and deed of said Corporation, for the uses and purposes therein mentioned, and on oath stated that he was authorized to execute said instrument and that the seal affixed is the corporate seal of said Corporation.

IN WITNESS WHEREOF I have hereunto set my hand and affixed my official seal the day and year first above written.



CHRISTINE GERACE
Notary Public, State of New York
No. 450497187
Qualified in Westchester County
Commission Expires March 22, 1983

STATE OF NEW YORK }
COUNTY OF NEW YORK } ss.:

July 3, A.D. 1981.

Before me personally appeared S.D. MINEO, who, being duly sworn, did say that he is an Assistant Secretary of BANKERS TRUST COMPANY and that the seal affixed to the foregoing instrument is the corporate seal of said Corporation and that said instrument was signed and sealed in behalf of said Corporation by authority of its Board of Directors; and he acknowledged said instrument to be its voluntary act and deed.

On this 3rd day of July, 1981, before me personally appeared S.D. MINEO, to me known to be an Assistant Secretary of BANKERS TRUST COMPANY, one of the corporations that executed the within and foregoing instrument, and acknowledged said instrument to be the free and voluntary act and deed of said Corporation, for the uses and purposes therein mentioned, and on oath stated that he was authorized to execute said instrument and that the seal affixed is the corporate seal of said Corporation.

IN WITNESS WHEREOF I have hereunto set my hand and affixed my official seal the day and year first above written.

Christine Lewis

CUSTOMER SERVICE
Notary Public in the State of New York
No. 42-1497147
Qualified in Richmond County
Certificate filed in New York County
Commission Expires March 30, 1983


KNOW ALL MEN BY THESE PRESENTS, that I, the undersigned, STANLEY BURG, as Co-Trustee, do hereby make, constitute and appoint Bankers Trust Company my true and lawful attorney-in-fact with full power and authority to execute, deliver and acknowledge on my behalf, as Co-Trustee, the Twelfth Supplemental Indenture of Northwest Natural Gas Company and any acknowledgments, oaths, representations or certificates attached thereto or in connection therewith and to do and perform all and every act and thing whatsoever requisite, necessary or desirable and proper to be done, as fully and to all intents and purposes as I might or could do if personally present, in connection with said execution, delivery or acknowledgment of such Indenture, acknowledgements, oaths, representations or certificates, hereby ratifying and confirming all that my said attorney-in-fact shall lawfully do or cause to be done by virtue hereof.

IN WITNESS WHEREOF, I have hereunto set my hand on this 2nd day of July, 1981.


STANLEY BURG as Co-Trustee

STATE OF NEW YORK)
COUNTY OF NEW YORK) ss:

On this 2nd day of July, 1981, before me, a Notary Public within and for said County, personally appeared STANLEY BURG, to me known to be the person described in and who executed the foregoing power of attorney and acknowledged that he executed the same as his free act and deed.



LORRAINE KAPUZYSKI
Notary Public, State of New York
No. 43-4030783
Qualified in Richmond County
Commission Expires in New York County
Commission expires March 30, 1982

[Conformed Copy]

NORTHWEST NATURAL GAS COMPANY

TO

BANKERS TRUST COMPANY

AND

STANLEY BURG (SUCCESSOR TO R. G. PAGE AND J. C. KENNEDY),

As Trustees under the Mortgage and
Deed of Trust, dated as of July 1,
1946, of Portland Gas & Coke Company
(now Northwest Natural Gas Company)

THIRTEENTH SUPPLEMENTAL INDENTURE

providing among other things for
First Mortgage Bonds, 10 1/8% Series due 1995

Dated as of June 1, 1985

THIRTEENTH SUPPLEMENTAL INDENTURE

INDENTURE, dated as of the first day of June, 1985, made and entered into by and between NORTHWEST NATURAL GAS COMPANY (formerly Portland Gas & Coke Company), a corporation of the State of Oregon, whose post office address is One Pacific Square, 220 N.W. Second Avenue, Portland, Oregon 97209 (hereinafter sometimes called the Company), party of the first part, and BANKERS TRUST COMPANY, a corporation of the State of New York, whose post office address is Four Albany Street, New York, New York 10015 (hereinafter sometimes called the Corporate Trustee) and STANLEY BURG (successor to R. G. PAGE and J. C. KENNEDY), whose post office address is 23 Dover Green, Staten Island, New York 10312 (hereinafter sometimes called the Co-Trustee), parties of the second part (the Corporate Trustee and the Co-Trustee being hereinafter together sometimes called the Trustees), as Trustees under the Mortgage and Deed of Trust, dated as of July 1, 1946 (hereinafter called the Mortgage), executed and delivered by Portland Gas & Coke Company (now Northwest Natural Gas Company) to secure the payment of bonds issued or to be issued under and in accordance with the provisions of the Mortgage, this indenture (hereinafter called Thirteenth Supplemental Indenture) being supplemental thereto;

WHEREAS the Mortgage was or is to be recorded in the official records of various counties in the States of Oregon and Washington which counties include or will include all counties in which this Thirteenth Supplemental Indenture is to be recorded; and

WHEREAS by the Mortgage the Company covenanted that it would execute and deliver such supplemental indenture or indentures and such further instruments and do such further acts as might be necessary or proper to carry out more effectually the purposes of the Mortgage and to make subject to the lien of the Mortgage any property thereafter acquired, made or constructed and intended to be subject to the lien thereof; and

WHEREAS the Company executed and delivered to the Trustees its First Supplemental Indenture, dated as of June 1, 1949 (hereinafter called its First Supplemental Indenture), its Second Supplemental Indenture, dated as of March 1, 1954 (hereinafter called its Second Supplemental Indenture), its Third Supplemental Indenture, dated as of April 1, 1956 (hereinafter called its Third Supplemental Indenture), its Fourth Supplemental Indenture, dated as of February 1, 1959 (hereinafter called its Fourth Supple-

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mental Indenture), its Fifth Supplemental Indenture, dated as of July 1, 1961 (hereinafter called its Fifth Supplemental Indenture), its Sixth Supplemental Indenture, dated as of January 1, 1964 (hereinafter called its Sixth Supplemental Indenture), its Seventh Supplemental Indenture, dated as of March 1, 1966 (hereinafter called its Seventh Supplemental Indenture), its Eighth Supplemental Indenture, dated as of December 1, 1969 (hereinafter called its Eighth Supplemental Indenture), its Ninth Supplemental Indenture, dated as of April 1, 1971 (hereinafter called its Ninth Supplemental Indenture), its Tenth Supplemental Indenture, dated as of January 1, 1975 (hereinafter called its Tenth Supplemental Indenture), its Eleventh Supplemental Indenture, dated as of December 1, 1975 (hereinafter called its Eleventh Supplemental Indenture); and

WHEREAS said First through Eleventh Supplemental Indentures were filed for record, and were recorded and indexed, as a mortgage of both real and personal property, in the official records of various counties in the States of Oregon and Washington which counties include or will include all counties in which this Thirteenth Supplemental Indenture is to be recorded; and

WHEREAS the Company executed and delivered to the Trustees its Twelfth Supplemental Indenture, dated as of July 1, 1981 (hereinafter called its Twelfth Supplemental Indenture); and

WHEREAS said Twelfth Supplemental Indenture was filed for record, and was recorded and indexed, as a mortgage of both real and personal property, and financing statements were filed, in the official records of the several counties and other offices in the States of Oregon and Washington listed below, as follows:

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Oregon
Real Property Mortgage Records

<u>County</u>	<u>Date Recorded</u>	<u>Book, Film or Reel</u>	<u>Page</u>
Benton	July 7, 1981	M-30015-81	--
Clackamas	July 6, 1981	81 23737	--
Clatsop	July 7, 1981	556	477
Columbia	July 7, 1981	170	663
Coos	July 7, 1981	81 3 1370	--
Douglas	July 7, 1981	793	409
Hood River	July 7, 1981	811211	--
Lane	July 7, 1981	8129229	--
Lincoln	July 7, 1981	125	1053
Linn	July 7, 1981	292	461
Marion	July 6, 1981	254	1835
Multnomah	July 6, 1981	1535	1455
Polk	July 6, 1981	158	1137
Tillamook	July 7, 1981	276	963
Wasco	July 7, 1981	811 735	--
Washington	July 7, 1981	81023623	--
Yamhill	July 7, 1981	162	0861

Filed as a Financing Statement

<u>Office</u>	<u>Date Filed for Record</u>	<u>File Number</u>
Secretary of State	July 6, 1981	G 49291

Washington
Real Property Mortgage Records

<u>County</u>	<u>Date Recorded</u>	<u>Book, Film or Reel</u>	<u>Page</u>
Clark	July 7, 1981	81-07070027	--
Klickitat	July 7, 1981	126	511
Skamania	July 7, 1981	57	957

Filed as a Financing Statement

<u>Office</u>	<u>Date Filed for Record</u>	<u>File Number</u>
Secretary of State	July 6, 1981	81188012

; and

WHEREAS an instrument dated as of June 14, 1951, was executed by the Company appointing J. C. KENNEDY as Co-Trustee in succession to said R. G. PAGE (resigned) under the Mortgage and by J. C. KENNEDY accepting the appointment as Co-Trustee under the Mortgage in succession to the said R. G. PAGE, which instrument was recorded in various counties in the States of Oregon and Washington; and

WHEREAS, in the Ninth Supplemental Indenture STANLEY BURG was appointed by the Company as Co-Trustee under the Mortgage in succession to said J. C. KENNEDY (resigned) and in the Ninth Supplemental Indenture STANLEY BURG accepted such appointment as Co-Trustee under the Mortgage in succession to said J. C. KENNEDY; and

WHEREAS in addition to the property described in the Mortgage, as heretofore supplemented, the Company has acquired certain other property, rights and interests in property; and

WHEREAS, the Company has heretofore issued, in accordance with the provisions of the Mortgage, as supplemented, the following series of First Mortgage Bonds:

<u>Series</u>	<u>Principal Amount Outstanding</u>
3-1/8% Series due 1976.....	None
3-7/8% Series due 1974.....	None
4 % Series due 1974.....	None
4-3/8% Series due 1976.....	None
5-1/8% Series due 1984.....	None
5-1/8% Series due 1986.....	\$ 3,898,000
4-3/4% Series due 1989.....	\$ 4,255,000
5-3/4% Series due 1991.....	\$10,330,000
9-3/8% Series due 1974.....	None
8-5/8% Series due 1996.....	\$13,697,000
12 % Series due 1984.....	None
10-1/2% Series due 1986.....	\$20,000,000
14-3/4% Series due 1989.....	\$30,000,000

; and

WHEREAS Section 8 of the Mortgage provides that the form of each series of bonds (other than the First Series) issued thereunder shall be established by Resolution of the Board of Directors of the Company; that the form of such series, as established by said Board of Di-

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rectors, shall specify the descriptive title of the bonds and various other terms thereof; and that such Series may also contain such provisions not inconsistent with the provisions of the Mortgage as the Board of Directors may, in its discretion, cause to be inserted therein expressing or referring to the terms and conditions upon which such bonds are to be issued and/or secured under the Mortgage; and

WHEREAS Section 120 of the Mortgage provides, among other things, that any power, privilege or right expressly or impliedly reserved to or in any way conferred upon the Company by any provision of the Mortgage, whether such power, privilege or right is in any way restricted or is unrestricted, may (to the extent permitted by law) be in whole or in part waived or surrendered or subjected to any restriction if at the time unrestricted or to additional restriction if already restricted, and the Company may enter into any further covenants, limitations or restrictions for the benefit of any one or more series of bonds issued thereunder, or the Company may cure any ambiguity contained therein or in any supplemental indenture or may (in lieu of establishment by Resolution as provided in Section 8 of the Mortgage) establish the terms and provisions of any series of bonds other than said First Series, by an instrument in writing executed and acknowledged by the Company in such manner as would be necessary to entitle a conveyance of real estate to record in all of the states in which any property at the time subject to the lien of the Mortgage shall be situated; and

WHEREAS the Company now desires to create a new series of bonds and (pursuant to the provisions of Section 120 of the Mortgage) to add to its covenants and agreements contained in the Mortgage, as heretofore supplemented, certain other covenants and agreements to be observed by it and to alter and amend in certain respects the covenants and provisions contained in the Mortgage, as heretofore supplemented and amended; and

WHEREAS the execution and delivery by the Company of this Thirteenth Supplemental Indenture, and the terms of the bonds of the Fourteenth Series hereinafter referred to, have been duly authorized by the Board of Directors of the Company by appropriate resolutions of said Board of Directors;

NOW, THEREFORE, THIS INDENTURE WITNESSETH:

That Northwest Natural Gas Company, in consideration of the premises and of One Dollar to it duly paid

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by the Trustees at or before the ensealing and delivery of these presents, the receipt whereof is hereby acknowledged, and in further assurance of the estate, title and rights of the Trustees, and in order further to secure the payment both of the principal of and interest and premium, if any, on the bonds from time to time issued under the Mortgage, according to their tenor and effect, and the performance of all the provisions of the Mortgage (including any instruments supplemental thereto and any modification made as in the Mortgage provided) and of said bonds, hereby grants, bargains, sells, releases, conveys, assigns, transfers, mortgages, pledges, sets over and confirms (subject, however, to Excepted Encumbrances, as defined in Section 6 of the Mortgage) unto Stanley Burg and (to the extent of its legal capacity to hold the same for the purposes hereof) to Bankers Trust Company, as Trustees under the Mortgage, and to their successor or successors in said trust, and to said Trustees and their successors and assigns forever, all property, real, personal and mixed, acquired by the Company after the date of the Mortgage, of the kind or nature specifically mentioned in Article XXI of the Mortgage or of any other kind or nature (except any herein or in the Mortgage expressly excepted) now owned or, subject to the provisions of subsection (I) of Section 87 of the Mortgage, hereafter acquired by the Company (by purchase, consolidation, merger, donation, construction, erection or in any other way) and wheresoever situated, including (without in anywise limiting or impairing by the enumeration of the same the scope and intent of the foregoing) all lands, gas plants, by-product plants, gas holders, gas mains and pipes; all power sites, water rights, reservoirs, canals, raceways, dams, aqueducts, and all other rights or means for appropriating, conveying, storing and supplying water; all rights of way and roads; all plants for the generation of electricity by steam, water and/or other power; all power houses, street lighting systems, standards and other equipment incidental thereto, telephone, radio, television and air-conditioning systems and equipment incidental thereto, water works, water systems, steam heat and hot water plants, substations, lines, service and supply systems, bridges, culverts, tracts, ice or refrigeration plants and equipment, offices, buildings and other structures and the equipment thereof; all machinery, engines, boilers, dynamos, gas, electric and other machines, regulators, meters, transformers, generators, motors, gas, electrical and mechanical appliances, conduits, cables, gas, water, steam heat or other pipes, service pipes, fittings, valves and connections, pole and transmission lines, wires, cables, tools, implements, apparatus, furniture and chattels; all franchises, consents or permits; all lines for the trans-

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mission and distribution of gas, electric current, steam heat or water for any purpose including mains, pipes, conduits, towers, poles, wires, cables, ducts and all apparatus for use in connection therewith; all real estate, lands, easements, servitudes, licenses, permits, franchises, privileges, rights of way and other rights in or relating to public or private property, real or personal, or the occupancy of such property and (except as herein or in the Mortgage, as heretofore supplemented, expressly excepted) all right, title and interest the Company may now have or may hereafter acquire in and to any and all property of any kind or nature wheresoever situated.

TOGETHER WITH all and singular the tenements, hereditaments, prescriptions, servitudes and appurtenances belonging or in anywise appertaining to the aforementioned property or any part thereof, with the reversion and reversions, remainder and remainders and (subject to the provisions of Section 57 of the Mortgage) the tolls, rents, revenues, issues, earnings, income, product and profits thereof, and all the estate, right, title and interest and claim whatsoever, at law as well as in equity, which the Company now has or may hereafter acquire in and to the aforementioned property and franchises and every part and parcel thereof.

IT IS HEREBY AGREED by the Company that, subject to the provisions of subsection (I) of Section 87 of the Mortgage, all the property, rights, and franchises acquired by the Company (by purchase, consolidation, merger, donation, construction, erection or in any other way) after the date hereof, except any herein or in the Mortgage, as heretofore supplemented, expressly excepted, shall be and are as fully granted and conveyed hereby and by the Mortgage, and as fully embraced within the lien hereof and the lien of the Mortgage, as supplemented, as if such property, rights and franchises were now owned by the Company and were specifically described herein or in the Mortgage, as heretofore supplemented, and conveyed hereby or thereby. Provided that the following are not and are not intended to be now or hereafter granted, bargained, sold, released, conveyed, assigned, transferred, mortgaged, pledged, set over or confirmed hereunder and are hereby expressly excepted from the lien and operation of this Thirteenth Supplemental Indenture and from the lien and operation of the Mortgage, as heretofore supplemented, viz: (1) cash, shares of stock, bonds, notes and other obligations and other securities not hereafter specifically pledged, paid, deposited, delivered or held under the Mortgage, as heretofore supplemented, or covenanted so to be; (2) merchandise, equipment, apparatus,

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materials or supplies held for the purpose of sale or other disposition in the usual course of business; fuel, oil and similar materials and supplies consumable in the operation of any of the properties of the Company; all aircraft, tractors, rolling stock, trolley coaches, buses, motor coaches, automobiles, motor trucks, and other vehicles and materials and supplies held for the purpose of repairing or replacing (in whole or in part) any of the same; (3) bills, notes and accounts receivable, judgments, demands and choses in action, and all contracts, leases and operating agreements not specifically pledged under the Mortgage, as heretofore supplemented, or covenanted so to be; (4) the last day of the term of any lease or leasehold which may be or become subject to the lien of the Mortgage; (5) gas, petroleum, carbon, chemicals, light oils, tar products, electric energy, steam, water, ice, and other materials or products, manufactured, stored, generated, produced, purchased or acquired by the Company for sale, distribution or use in the ordinary course of its business; all timber, minerals, mineral rights and royalties and all Natural Gas and Oil Production Property, as defined in Section 4 of the Mortgage; and (6) the Company's franchise to be a corporation; provided, however, that the property and rights expressly excepted from the lien and operation of this Thirteenth Supplemental Indenture and from the lien and operation of the Mortgage, as heretofore supplemented, in the above subdivisions (2) and (3) shall (to the extent permitted by law) cease to be so excepted in the event and as of the date that either or both of the Trustees or a receiver or trustee shall enter upon and take possession of the Mortgaged and Pledged Property in the manner provided in Article XIII of the Mortgage by reason of the occurrence of a Default as defined in Section 65 thereof.

TO HAVE AND TO HOLD all such properties, real, personal and mixed, granted, bargained, sold, released, conveyed, assigned, transferred, mortgaged, pledged, set over or confirmed by the Company as aforesaid, or intended so to be, unto Stanley Burg and (to the extent of its legal capacity to hold the same for the purposes hereof) to Bankers Trust Company, as Trustees, and their successors and assigns forever.

IN TRUST NEVERTHELESS, for the same purposes and upon the same terms, trusts and conditions and subject to and with the same provisos and covenants as are set forth in the Mortgage, as heretofore supplemented, this Thirteenth Supplemental Indenture being supplemental thereto.

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AND IT IS HEREBY COVENANTED by the Company that all the terms, conditions, provisos, covenants and provisions contained in the Mortgage, as heretofore supplemented, shall affect and apply to the property hereinbefore described and conveyed, and to the estates, rights, obligations and duties of the Company and the Trustees and the beneficiaries of the trust with respect to said property, and to the Trustees and their successors in the trust, in the same manner and with the same effect as if the said property had been owned by the Company at the time of the execution of the Mortgage, and had been specifically and at length described in and conveyed to said Trustees by the Mortgage as a part of the property therein stated to be conveyed.

The Company further covenants and agrees to and with the Trustees and their successors in said trust under the Mortgage, as follows:

ARTICLE I.

Fourteenth Series of Bonds.

SECTION 1.01. There shall be a series of bonds designated "10 1/8% Series due 1995" (herein sometimes referred to as the "Fourteenth Series"), each of which shall also bear the descriptive title First Mortgage Bond, and the form thereof, which shall be established by Resolution of the Board of Directors of the Company, shall contain suitable provisions with respect to the matters hereinafter in this Section specified. Bonds of the Fourteenth Series shall be limited to \$15,000,000 in aggregate principal amount at any one time Outstanding except as provided in Section 16 of the Mortgage and shall mature on June 1, 1995, and shall be issued as fully registered bonds in denominations of One Thousand Dollars and, at the option of the Company, in any multiple or multiples of One Thousand Dollars (the exercise of such option to be evidenced by the execution and delivery thereof). Bonds of the Fourteenth Series shall bear interest at the rate of 10 1/8% per annum, payable semi-annually on December 1 and June 1 of each year; and the principal of, premium, if any, and interest on each said bond shall be payable at the office or agency of the Company in the Borough of Manhattan, The City of New York, in such coin or currency of the United States of America as at the time of payment is legal tender for public and private debts. Bonds of the

Fourteenth Series shall be dated as in Section 10 of the Mortgage provided.

Bonds of the Fourteenth Series shall be redeemable either at the option of the Company or pursuant to the requirements of the Mortgage in whole at any time, or in part from time to time, prior to maturity, upon notice, as provided in Section 52 of the Mortgage, mailed at least thirty (30) days prior to the date fixed for redemption, at the following general redemption prices, expressed in percentages of the principal amount of the bonds to be redeemed:

GENERAL REDEMPTION PRICES

If redeemed during the 12 months period ending May 31,

1986.....	109.50%	1991.....	104.23%
1987.....	108.45%	1992.....	103.17%
1988.....	107.39%	1993.....	102.12%
1989.....	106.34%	1994.....	101.06%
1990.....	105.28%	1995.....	100.00%

in each case, together with accrued interest to the date fixed for redemption; provided, however, that no bonds of the Fourteenth Series may be redeemed at said general redemption prices prior to June 1, 1990, as part of any re-funding operation involving, directly or indirectly, the incurring of indebtedness by the Company having a cost (calculated in accordance with acceptable financial practice) lower than 10.289% per annum.

Bonds of the Fourteenth Series shall also be redeemable in whole at any time, or in part from time to time, prior to maturity, upon like notice, by the application (either at the option of the Company or pursuant to the requirements of the Mortgage) of cash deposited with the Corporate Trustee pursuant to the provisions of Section 64 of the Mortgage (so long as any bonds of the Sixth, Seventh, Eighth or Tenth Series remain Outstanding) or with the Proceeds of Released Property, at the following special redemption prices, expressed in percentages of the principal amount of the bonds to be redeemed:

SPECIAL REDEMPTION PRICES

If redeemed during the 12 months period ending May 31,

1986.....	100.00%	1991.....	100.00%
1987.....	100.00%	1992.....	100.00%
1988.....	100.00%	1993.....	100.00%
1989.....	100.00%	1994.....	100.00%
1990.....	100.00%	1995.....	100.00%

in each case, together with accrued interest to the date fixed for redemption.

ARTICLE II.

Exchanges and Transfers of Bonds of the Fourteenth Series.

SECTION 2.01. At the option of the registered owner, any bonds of the Fourteenth Series, upon surrender thereof, for cancellation, at the office or agency of the Company in the Borough of Manhattan, The City of New York, shall (subject to the provisions of Section 12 of the Mortgage) be exchangeable for a like aggregate principal amount of bonds of the same series of other authorized denominations.

Transfers of bonds of the Fourteenth Series may be registered (subject to the provisions of Section 12 of the Mortgage) at the office or agency of the Company in the Borough of Manhattan, The City of New York or such other locations as the Company may designate from time to time.

Upon any registration of transfer or exchange of bonds of the Fourteenth Series, the Company may make a charge therefor sufficient to reimburse it for any tax or taxes required to be paid solely by virtue of such transfer by the Company, as provided in Section 12 of the Mortgage, but the Company hereby waives any right to make a charge in addition thereto for any registration or exchange or transfer of bonds of the Fourteenth Series.

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ARTICLE III.

Miscellaneous Provisions.

SECTION 3.01. Subject to the amendments provided for in this Thirteenth Supplemental Indenture, the terms defined in the Mortgage, as heretofore supplemented, shall, for all purposes of this Thirteenth Supplemental Indenture, have the meanings specified in the Mortgage, as heretofore supplemented.

SECTION 3.02. The third paragraph of Section 106 of the Mortgage is amended to read in its entirety as follows, such amendment to take effect immediately for the Fourteenth Series of bonds and all future series of bonds to be issued under the Mortgage:

"Bonds and interest obligations for the payment of which and bonds for the redemption of which either (i) moneys in the necessary amount or (ii) (a) direct obligations of the government of the United States of America or (b) obligations guaranteed by the government of the United States of America or (c) securities that are backed by obligations of the government of the United States of America as collateral under an arrangement by which the interest and principal payments on the collateral generally flow immediately through to the holder of the security, which in any case are not subject to redemption prior to maturity by anyone other than the holders the principal of and the interest on which when due, and without any regard to reinvestment thereof, in the opinion of an independent accountant, and, in the opinion of the officers of the Company executing an Officers' Certificate to that effect, will provide moneys which, together with the moneys, if any, deposited with or held by the Corporate Trustee, shall be sufficient to pay when due the principal of, premium, if any, and interest due and to become due on said bonds or portions thereof on the redemption date or maturity date thereof, as the case may be, shall have been set apart by or deposited with the Corporate Trustee, with irrevocable direction so to apply the same, subject to the provisions of Section 119 hereof (with or without any additional right given to the holders to surrender their bonds or obtain therefrom payment therefor prior to the redemption date) shall for purposes of satisfying the Lien of this Indenture be deemed to have been paid and for any other purpose under this Indenture be deemed not to be Outstanding; provided that in case of redemption the notice requisite to the validity of such redemption shall have been given or arrangements shall have been made in-

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suring to the satisfaction of the Corporate Trustee that the same will be given."

SECTION 3.03. When all bonds of the Sixth through Thirteenth Series are no longer Outstanding, the first paragraph of Section 99 of the Mortgage is amended to read as follows:

"Section 99. (a) If any Trustee has or acquires any conflicting interest, as defined by subdivision (d) of this Section, such Trustee shall within ninety (90) days after ascertaining that it has such conflicting interest, either eliminate such conflicting interest or resign by giving written notice to the Company, but such resignation shall not become effective until the appointment of a successor trustee and such successor's acceptance of such appointment. The Company covenants to take prompt steps to have a successor appointed in the manner hereinafter provided in Section 102 hereof. Upon giving such notice of resignation, the resigning Trustee shall publish notice thereof, once in one newspaper printed in the English language and of general circulation in the Borough of Manhattan, The City of New York, on any business day of the week. If the resigning Trustee fails to publish such notice within ten (10) days after giving written notice of resignation to the Company, the Company shall publish such notice."

SECTION 3.04. When all bonds of the Sixth through Thirteenth Series are no longer Outstanding, the first paragraph of Section 101 of the Mortgage is amended to read as follows:

"Section 101. Any Trustee may at any time resign and be discharged of the trusts hereby created by giving written notice to the Company specifying the day upon which such resignation shall take effect and thereafter publishing notice thereof, once in one newspaper printed in the English language and of general circulation in the Borough of Manhattan, The City of New York, on any business day of the week, and such resignation shall take effect upon the day specified in such notice unless previously a successor trustee shall have been appointed by the bondholders or the Company in the manner hereinafter provided in Section 102 and in such event such resignation shall take effect immediately on the appointment of such successor trustee. This Section shall not be

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applicable to resignations pursuant to Section 99 hereof."

Section 3.05. All bonds of the First through Third Series being no longer Outstanding, Section 5 of the Mortgage is amended to add the following proviso at the end of clause (4) thereof:

"provided, however, that when no bonds of the First, Second or Third Series remain Outstanding, Property Additions of a Cost not in excess of \$1,100,000 so substituted at any time under subdivision (B) of subsection (II) of Section 4 hereof for Funded Property used primarily and principally in the handling and processing of carbon owned at April 1, 1956 and retired subsequent to April 1, 1956 shall cease to be or to be deemed to have been Funded Property;"

SECTION 3.06. The Trustees hereby accept the trusts hereby declared, provided, created or supplemented, and agree to perform the same upon the terms and conditions herein and in the Mortgage, as heretofore supplemented, set forth, including the following:

The Trustees shall not be responsible in any manner whatsoever for or in respect of the validity or sufficiency of this Thirteenth Supplemental Indenture or for or in respect of the recitals contained herein, all of which recitals are made by the Company solely. In general each and every term and condition contained in Article XVII of the Mortgage shall apply to and form part of this Thirteenth Supplemental Indenture with the same force and effect as if the same were herein set forth in full, with such omissions, variations and insertions, if any, as may be appropriate to make the same conform to the provisions of the Thirteenth Supplemental Indenture.

SECTION 3.07. Whenever in this Thirteenth Supplemental Indenture any of the parties hereto is named or referred to, this shall, subject to the provisions of Articles XVI and XVII of the Mortgage, be deemed to include the successors or assigns of such party, and all the covenants and agreements in this Thirteenth Supplemental Indenture contained by or on behalf of the Company or by or on behalf of the Trustees shall bind and inure to the benefit of the respective successors and assigns of such parties whether so expressed or not.

SECTION 3.08. Nothing in this Thirteenth Supplemental Indenture, expressed or implied, is intended, or

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shall be construed, to confer upon, or to give to, any person, firm or corporation, other than the parties hereto and the holders of the bonds and coupons outstanding under the Mortgage, any right, remedy, or claim under or by reason of this Thirteenth Supplemental Indenture or any covenant, condition, stipulation, promise or agreement hereof, and all the covenants, conditions, stipulations, promises and agreements by or on behalf of the Company as set forth in this Thirteenth Supplemental Indenture shall be for the sole and exclusive benefit of the parties hereto, and of the holders of the bonds and of the coupons outstanding under the Mortgage.

SECTION 3.09. This Thirteenth Supplemental Indenture has been executed in several identical counterparts, each of which shall be an original and all of which shall constitute but one and the same instrument.

IN WITNESS WHEREOF, Northwest Natural Gas Company, party hereto of the first part, has caused its corporate name to be hereunto affixed, and this instrument to be signed and sealed by its President or one of its Vice Presidents, and its corporate seal to be attested by its Secretary or one of its Assistant Secretaries for and in its behalf on the 7th day of June 1985, as of June 1, 1985 in Portland, Oregon; Bankers Trust Company, one of the parties hereto of the second part, has caused its corporate name to be hereunto affixed, and this instrument to be signed and sealed by one of its Vice Presidents or one of its Assistant Vice Presidents and its corporate seal to be attested by one of its Assistant Secretaries; and Stanley Burg, one of the parties hereto of the second

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part, has hereunto set his hand and affixed his seal, all in The City of New York, on the 11th day of June, 1985, as of June 1, 1985.

NORTHWEST NATURAL GAS COMPANY

[Corporate Seal]

By Robert L. Ridgley
President

Attest:

C. J. Rue
Secretary

Executed, sealed and delivered by NORTHWEST NATURAL GAS COMPANY in the presence of:

W. E. Radford
Leslie K. Alldrin

BANKERS TRUST COMPANY, as Trustee,

[Corporate Seal]

By T. J. Moskie
Vice President

Attest:

Robert Cascone
Assistant Secretary

Stanley Burg
STANLEY BURG, as Trustee

Executed, sealed and delivered by BANKERS TRUST COMPANY and STANLEY BURG in the presence of:

Marie A. Colas
Alfred C. Vinton

STATE OF OREGON)
 : ss.:
COUNTY OF MULTNOMAH)

June 7, A.D. 1985.

Before me personally appeared ROBERT L. RIDGLEY, who, being duly sworn, did say that he is President of NORTHWEST NATURAL GAS COMPANY and that the seal affixed to the foregoing instrument is the corporate seal of said Corporation and that said instrument was signed and sealed in behalf of said Corporation by authority of its Board of Directors; and he acknowledged said instrument to be its voluntary act and deed.

On this 7th day of June, before me personally appeared ROBERT L. RIDGLEY, to me known to be President of NORTHWEST NATURAL GAS COMPANY, one of the corporations that executed the within and foregoing instrument, and acknowledged said instrument to be the free and voluntary act and deed of said Corporation, for the uses and purposes therein mentioned, and on oath stated that he was authorized to execute said instrument and that the seal affixed is the corporate seal of said Corporation.

IN WITNESS WHEREOF I have hereunto set my hand and affixed my official seal the day and year first above written.

 R. L. Hordichok
R. L. HORDICHOK
Notary Public, State of Oregon
My Commission Expires 10/9/88

[Notarial Seal]

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STATE OF NEW YORK)
 : ss.:
COUNTY OF NEW YORK)

June 11, A.D. 1985.

Before me personally appeared T. J. MOSKIE, who, being duly sworn, did say that he is a Vice President of BANKERS TRUST COMPANY and that the seal affixed to the foregoing instrument is the corporate seal of said Corporation and that said instrument was signed and sealed in behalf of said Corporation by authority of its Board of Directors; and he acknowledged said instrument to be its voluntary act and deed.

On this 11th day of June, 1985, before me personally appeared T. J. MOSKIE, to me known to be a Vice President of BANKERS TRUST COMPANY, one of the corporations that executed the within and foregoing instrument, and acknowledged said instrument to be the free and voluntary act and deed of said Corporation, for the uses and purposes therein mentioned, and on oath stated that he was authorized to execute said instrument and that the seal affixed is the corporate seal of said Corporation.

IN WITNESS WHEREOF I have hereunto set my hand and affixed my official seal the day and year first above written.

Helmut F. Leuffen
HELMUT F. LEUFFEN
Notary Public, State of New York
No. 31-4657770
Qualified in New York County
Commission Expires March 30, 1987

[Notarial Seal]

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STATE OF NEW YORK)
 : ss.:
COUNTY OF NEW YORK)

June 11th, A.D. 1985.

Before me personally appeared the above-named STANLEY BURG and acknowledged the foregoing instrument to be his voluntary act and deed.

On this day personally appeared before me STANLEY BURG to me known to be the individual described in and who executed the within and foregoing instrument, and acknowledged that he signed the same as his free and voluntary act and deed, for the uses and purposes therein mentioned.

Given under my hand and official seal this 11th day of June, 1985.

Helmut F. Leuffen
HELMUT F. LEUFFEN
Notary Public, State of New York
No. 31-4657770
Qualified in New York County
Commission Expires March 30, 1987

[Notarial Seal]

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SUMMARY OF RECORDING DATA

In the State of Oregon

Real Property Mortgage Records

<u>Counterpart No.</u>	<u>County</u>	<u>Date Recorded</u>	<u>Book, Film or Reel</u>	<u>Page</u>
10	Benton	June 19, 1985	M-68069-85	-
11	Clackamas	June 19, 1985	85 21105	-
12	Clatsop	June 19, 1985	638	554
13	Columbia	June 19, 1985	191	127
14	Coos	June 19, 1985	85 3 0443	-
15	Douglas	June 19, 1985	917	169
16	Hood River	June 19, 1985	851100	-
17	Lane	June 19, 1985	8521471	-
18	Lincoln	June 19, 1985	161	2312
19	Linn	June 19, 1985	387	224
20	Marion	June 19, 1985	398	117
21	Multnomah	June 19, 1985	1831	1136
22	Polk	June 19, 1985	187	1346
23	Tillamook	June 19, 1985	299	176
24	Wasco	June 19, 1985	851312	-
25	Washington	June 19, 1985	85022638	-
26	Yamhill	June 19, 1985	195	747

Filed as a Financing Statement

<u>Counterpart No.</u>	<u>Office</u>	<u>Date Filed for Record</u>	<u>File No.</u>
8	Secretary of State	June 19, 1985	J 94033

In the State of Washington

Real Property Mortgage Records

<u>Counterpart No.</u>	<u>County</u>	<u>Date Recorded</u>	<u>Book, Film or Reel</u>	<u>Page</u>
28	Clark	June 19, 1985	85-06190126	-
29	Klickitat	June 19, 1985	135	474
30	Skamania	June 19, 1985	61	583

Filed as a Financing Statement

<u>Counterpart No.</u>	<u>Office</u>	<u>Date Filed for Record</u>	<u>File No.</u>
27	Secretary of State	June 19, 1985	85-171-0052

[Conformed Copy]

NORTHWEST NATURAL GAS COMPANY

TO

BANKERS TRUST COMPANY

AND

STANLEY BURG (SUCCESSOR TO R. G. PAGE AND J. C. KENNEDY),

As Trustees under the Mortgage and
Deed of Trust, dated as of July 1,
1946, of Portland Gas & Coke Company
(now Northwest Natural Gas Company)

FOURTEENTH SUPPLEMENTAL INDENTURE

providing among other things for

First Mortgage Bonds, 10.35% Series due November 1, 1997

Dated as of November 1, 1985

FOURTEENTH SUPPLEMENTAL INDENTURE

INDENTURE, dated as of the first day of November, 1985, made and entered into by and between NORTHWEST NATURAL GAS COMPANY (formerly Portland Gas & Coke Company), a corporation of the State of Oregon, whose post office address is One Pacific Square, 220 N.W. Second Avenue, Portland, Oregon 97209 (hereinafter sometimes called the Company), party of the first part, and BANKERS TRUST COMPANY, a corporation of the State of New York, whose post office address is One Bankers Trust Plaza, New York, New York 10005 (hereinafter sometimes called the Corporate Trustee) and STANLEY BURG (successor to R. G. PAGE and J. C. KENNEDY), whose post office address is 23 Dover Green, Staten Island, New York 10312 (hereinafter sometimes called the Co-Trustee), parties of the second part (the Corporate Trustee and the Co-Trustee being hereinafter together sometimes called the Trustees), as Trustees under the Mortgage and Deed of Trust, dated as of July 1, 1946 (hereinafter called the Mortgage), executed and delivered by Portland Gas & Coke Company (now Northwest Natural Gas Company) to secure the payment of bonds issued or to be issued under and in accordance with the provisions of the Mortgage, this indenture (hereinafter called Fourteenth Supplemental Indenture) being supplemental thereto;

WHEREAS the Mortgage was or is to be recorded in the official records of various counties in the States of Oregon and Washington which counties include or will include all counties in which this Fourteenth Supplemental Indenture is to be recorded; and

WHEREAS by the Mortgage the Company covenanted that it would execute and deliver such supplemental indenture or indentures and such further instruments and do such further acts as might be necessary or proper to carry out more effectually the purposes of the Mortgage and to make subject to the lien of the Mortgage any property thereafter acquired, made or constructed and intended to be subject to the lien thereof; and

WHEREAS the Company executed and delivered to the Trustees its First Supplemental Indenture, dated as of June 1, 1949 (hereinafter called its First Supplemental Indenture), its Second Supplemental Indenture, dated as of March 1, 1954 (hereinafter called its Second Supplemental Indenture), its Third Supplemental Indenture, dated as of April 1, 1956 (hereinafter called its Third Supplemental Indenture), its Fourth Supplemental Indenture, dated as of

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February 1, 1959 (hereinafter called its Fourth Supplemental Indenture), its Fifth Supplemental Indenture, dated as of July 1, 1961 (hereinafter called its Fifth Supplemental Indenture), its Sixth Supplemental Indenture, dated as of January 1, 1964 (hereinafter called its Sixth Supplemental Indenture), its Seventh Supplemental Indenture, dated as of March 1, 1966 (hereinafter called its Seventh Supplemental Indenture), its Eighth Supplemental Indenture, dated as of December 1, 1969 (hereinafter called its Eighth Supplemental Indenture), its Ninth Supplemental Indenture, dated as of April 1, 1971 (hereinafter called its Ninth Supplemental Indenture), its Tenth Supplemental Indenture, dated as of January 1, 1975 (hereinafter called its Tenth Supplemental Indenture), its Eleventh Supplemental Indenture, dated as of December 1, 1975 (hereinafter called its Eleventh Supplemental Indenture) and its Twelfth Supplemental Indenture, dated as of July 1, 1981 (hereinafter called its Twelfth Supplemental Indenture); and

WHEREAS said First through Twelfth Supplemental Indentures were filed for record, and were recorded and indexed, as a mortgage of both real and personal property, in the official records of various counties in the States of Oregon and Washington which counties include or will include all counties in which this Fourteenth Supplemental Indenture is to be recorded; and

WHEREAS the Company executed and delivered to the Trustees its Thirteenth Supplemental Indenture, dated as of June 1, 1985 (hereinafter called its Thirteenth Supplemental Indenture); and

WHEREAS said Thirteenth Supplemental Indenture was filed for record, and was recorded and indexed, as a mortgage of both real and personal property, and financing statements were filed, in the official records of the several counties and other offices in the States of Oregon and Washington listed below, as follows:

Oregon
Real Property Mortgage Records

<u>County</u>	<u>Date Recorded</u>	<u>Book, Film or Reel</u>	<u>Page</u>
Benton	June 19, 1985	M-68069-85	-
Clackamas	June 19, 1985	85-21105	-
Clatsop	June 19, 1985	638	554
Columbia	June 19, 1985	191	127
Coos	June 19, 1985	85 3 0443	-
Douglas	June 19, 1985	917	169
Hood River	June 19, 1985	851100	-
Lane	June 19, 1985	8521471	-
Lincoln	June 19, 1985	161	2312
Linn	June 19, 1985	387	224
Marion	June 19, 1985	398	117
Multnomah	June 19, 1985	1831	1136
Polk	June 19, 1985	187	1346
Tillamook	June 19, 1985	299	176
Wasco	June 19, 1985	851312	-
Washington	June 19, 1985	85022638	-
Yamhill	June 19, 1985	195	747

Filed as a Financing Statement

<u>Office</u>	<u>Date Filed for Record</u>	<u>File Number</u>
Secretary of State	June 19, 1985	J 94033

Washington
Real Property Mortgage Records

<u>County</u>	<u>Date Recorded</u>	<u>Book, Film or Reel</u>	<u>Page</u>
Clark	June 19, 1985	85-06190126	-
Klickitat	June 19, 1985	135	474
Skamania	June 19, 1985	61	583

Filed as a Financing Statement

<u>Office</u>	<u>Date Filed for Record</u>	<u>File Number</u>
Secretary of State ; and	June 19, 1985	85-171-0052

WHEREAS an instrument dated as of June 14, 1951, was executed by the Company appointing J. C. Kennedy as Co-Trustee in succession to said R. G. Page (resigned) under the Mortgage and by J. C. Kennedy accepting the appointment as Co-Trustee under the Mortgage in succession to the said R. G. Page, which instrument was recorded in various counties in the States of Oregon and Washington; and

WHEREAS, in the Ninth Supplemental Indenture STANLEY BURG was appointed by the Company as Co-Trustee under the Mortgage in succession to said J. C. KENNEDY (resigned) and in the Ninth Supplemental Indenture Stanley Burg accepted such appointment as Co-Trustee under the Mortgage in succession to said J. C. Kennedy; and

WHEREAS in addition to the property described in the Mortgage, as heretofore supplemented, the Company has acquired certain other property, rights and interests in property; and

WHEREAS, the Company has heretofore issued, in accordance with the provisions of the Mortgage, as supplemented, the following series of First Mortgage Bonds:

<u>Series</u>	<u>Principal Amount Outstanding</u>
3-1/8% Series due 1976.....	None
3-7/8% Series due 1974.....	None
4 % Series due 1974.....	None
4-3/8% Series due 1976.....	None
5-1/8% Series due 1984.....	None
5-1/8% Series due 1986.....	\$ 3,898,000
4-3/4% Series due 1989.....	\$ 4,255,000
5-3/4% Series due 1991.....	\$10,330,000
9-3/8% Series due 1974.....	None
8-5/8% Series due 1996.....	\$13,508,000
12 % Series due 1984.....	None
10-1/2% Series due 1986.....	None
14-3/4% Series due 1989.....	\$30,000,000
10-1/8% Series due 1995.....	\$15,000,000

; and

WHEREAS Section 8 of the Mortgage provides that the form of each series of bonds (other than the First Series) issued thereunder shall be established by Resolution of the Board of Directors of the Company; that the

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form of such series, as established by said Board of Directors, shall specify the descriptive title of the bonds and various other terms thereof; and that such Series may also contain such provisions not inconsistent with the provisions of the Mortgage as the Board of Directors may, in its discretion, cause to be inserted therein expressing or referring to the terms and conditions upon which such bonds are to be issued and/or secured under the Mortgage; and

WHEREAS Section 120 of the Mortgage provides, among other things, that any power, privilege or right expressly or impliedly reserved to or in any way conferred upon the Company by any provision of the Mortgage, whether such power, privilege or right is in any way restricted or is unrestricted, may (to the extent permitted by law) be in whole or in part waived or surrendered or subjected to any restriction if at the time unrestricted or to additional restriction if already restricted, and the Company may enter into any further covenants, limitations or restrictions for the benefit of any one or more series of bonds issued thereunder, or the Company may cure any ambiguity contained therein or in any supplemental indenture or may (in lieu of establishment by Resolution as provided in Section 8 of the Mortgage) establish the terms and provisions of any series of bonds other than said First Series, by an instrument in writing executed and acknowledged by the Company in such manner as would be necessary to entitle a conveyance of real estate to record in all of the states in which any property at the time subject to the lien of the Mortgage shall be situated; and

WHEREAS the Company now desires to create a new series of bonds and (pursuant to the provisions of Section 120 of the Mortgage) to add to its covenants and agreements contained in the Mortgage, as heretofore supplemented, certain other covenants and agreements to be observed by it and to alter and amend in certain respects the covenants and provisions contained in the Mortgage, as heretofore supplemented and amended; and

WHEREAS the execution and delivery by the Company of this Fourteenth Supplemental Indenture, and the terms of the bonds of the Fifteenth Series hereinafter referred to, have been duly authorized by the Board of Directors of the Company by appropriate resolutions of said Board of Directors;

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NOW, THEREFORE, THIS INDENTURE WITNESSETH:

That Northwest Natural Gas Company, in consideration of the premises and of One Dollar to it duly paid by the Trustees at or before the ensembling and delivery of these presents, the receipt whereof is hereby acknowledged, and in further assurance of the estate, title and rights of the Trustees, and in order further to secure the payment both of the principal of and interest and premium, if any, on the bonds from time to time issued under the Mortgage, according to their tenor and effect, and the performance of all the provisions of the Mortgage (including any instruments supplemental thereto and any modification made as in the Mortgage provided) and of said bonds, hereby grants, bargains, sells, releases, conveys, assigns, transfers, mortgages, pledges, sets over and confirms (subject, however, to Excepted Encumbrances, as defined in Section 6 of the Mortgage) unto Stanley Burg and (to the extent of its legal capacity to hold the same for the purposes hereof) to Bankers Trust Company, as Trustees under the Mortgage, and to their successor or successors in said trust, and to said Trustees and their successors and assigns forever, all property, real, personal and mixed, acquired by the Company after the date of the Mortgage, of the kind or nature specifically mentioned in Article XXI of the Mortgage or of any other kind or nature (except any herein or in the Mortgage expressly excepted) now owned or, subject to the provisions of subsection (I) of Section 87 of the Mortgage, hereafter acquired by the Company (by purchase, consolidation, merger, donation, construction, erection or in any other way) and wheresoever situated, including (without in anywise limiting or impairing by the enumeration of the same the scope and intent of the foregoing) all lands, gas plants, by-product plants, gas holders, gas mains and pipes; all power sites, water rights, reservoirs, canals, raceways, dams, aqueducts, and all other rights or means for appropriating, conveying, storing and supplying water; all rights of way and roads; all plants for the generation of electricity by steam, water and/or other power; all power houses, street lighting systems, standards and other equipment incidental thereto, telephone, radio, television and air-conditioning systems and equipment incidental thereto, water works, water systems, steam heat and hot water plants, substations, lines, service and supply systems, bridges, culverts, tracts, ice or refrigeration plants and equipment, offices, buildings and other structures and the equipment thereof; all machinery, engines, boilers, dynamos, gas, electric and other machines, regulators, meters, transformers, generators, motors, gas, electrical and mechanical appliances, conduits, cables, gas, water, steam heat

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or other pipes, service pipes, fittings, valves and connections, pole and transmission lines, wires, cables, tools, implements, apparatus, furniture and chattels; all franchises, consents or permits; all lines for the transmission and distribution of gas, electric current, steam heat or water for any purpose including mains, pipes, conduits, towers, poles, wires, cables, ducts and all apparatus for use in connection therewith; all real estate, lands, easements, servitudes, licenses, permits, franchises, privileges, rights of way and other rights in or relating to public or private property, real or personal, or the occupancy of such property and (except as herein or in the Mortgage, as heretofore supplemented, expressly excepted) all right, title and interest the Company may now have or may hereafter acquire in and to any and all property of any kind or nature wheresoever situated.

TOGETHER WITH all and singular the tenements, hereditaments, prescriptions, servitudes and appurtenances belonging or in anywise appertaining to the aforementioned property or any part thereof, with the reversion and reversions, remainder and remainders and (subject to the provisions of Section 57 of the Mortgage) the tolls, rents, revenues, issues, earnings, income, product and profits thereof, and all the estate, right, title and interest and claim whatsoever, at law as well as in equity, which the Company now has or may hereafter acquire in and to the aforementioned property and franchises and every part and parcel thereof.

IT IS HEREBY AGREED by the Company that, subject to the provisions of subsection (I) of Section 87 of the Mortgage, all the property, rights, and franchises acquired by the Company (by purchase, consolidation, merger, donation, construction, erection or in any other way) after the date hereof, except any herein or in the Mortgage, as heretofore supplemented, expressly excepted, shall be and are as fully granted and conveyed hereby and by the Mortgage, and as fully embraced within the lien hereof and the lien of the Mortgage, as supplemented, as if such property, rights and franchises were now owned by the Company and were specifically described herein or in the Mortgage, as heretofore supplemented, and conveyed hereby or thereby. Provided that the following are not and are not intended to be now or hereafter granted, bargained, sold, released, conveyed, assigned, transferred, mortgaged, pledged, set over or confirmed hereunder and are hereby expressly excepted from the lien and operation of this Fourteenth Supplemental Indenture and from the lien and operation of the Mortgage, as heretofore supplemented, viz: (1) cash, shares of stock, bonds, notes and

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other obligations and other securities not hereafter specifically pledged, paid, deposited, delivered or held under the Mortgage, as heretofore supplemented, or covenanted so to be; (2) merchandise, equipment, apparatus, materials or supplies held for the purpose of sale or other disposition in the usual course of business; fuel, oil and similar materials and supplies consumable in the operation of any of the properties of the Company; all aircraft, tractors, rolling stock, trolley coaches, buses, motor coaches, automobiles, motor trucks, and other vehicles and materials and supplies held for the purpose of repairing or replacing (in whole or in part) any of the same; (3) bills, notes and accounts receivable, judgments, demands and choses in action, and all contracts, leases and operating agreements not specifically pledged under the Mortgage, as heretofore supplemented, or covenanted so to be; (4) the last day of the term of any lease or leasehold which may be or become subject to the lien of the Mortgage; (5) gas, petroleum, carbon, chemicals, light oils, tar products, electric energy, steam, water, ice, and other materials or products, manufactured, stored, generated, produced, purchased or acquired by the Company for sale, distribution or use in the ordinary course of its business; all timber, minerals, mineral rights and royalties and all Natural Gas and Oil Production Property, as defined in Section 4 of the Mortgage; and (6) the Company's franchise to be a corporation; provided, however, that the property and rights expressly excepted from the lien and operation of this Fourteenth Supplemental Indenture and from the lien and operation of the Mortgage, as heretofore supplemented, in the above subdivisions (2) and (3) shall (to the extent permitted by law) cease to be so excepted in the event and as of the date that either or both of the Trustees or a receiver or trustee shall enter upon and take possession of the Mortgaged and Pledged Property in the manner provided in Article XIII of the Mortgage by reason of the occurrence of a Default as defined in Section 65 thereof.

TO HAVE AND TO HOLD all such properties, real, personal and mixed, granted, bargained, sold, released, conveyed, assigned, transferred, mortgaged, pledged, set over or confirmed by the Company as aforesaid, or intended so to be, unto Stanley Burg and (to the extent of its legal capacity to hold the same for the purposes hereof) to Bankers Trust Company, as Trustees, and their successors and assigns forever.

IN TRUST NEVERTHELESS, for the same purposes and upon the same terms, trusts and conditions and subject to and with the same provisos and covenants as are set forth

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in the Mortgage, as heretofore supplemented, this Fourteenth Supplemental Indenture being supplemental thereto.

AND IT IS HEREBY COVENANTED by the Company that all the terms, conditions, provisos, covenants and provisions contained in the Mortgage, as heretofore supplemented, shall affect and apply to the property hereinbefore described and conveyed, and to the estates, rights, obligations and duties of the Company and the Trustees and the beneficiaries of the trust with respect to said property, and to the Trustees and their successors in the trust, in the same manner and with the same effect as if the said property had been owned by the Company at the time of the execution of the Mortgage, and had been specifically and at length described in and conveyed to said Trustees by the Mortgage as a part of the property therein stated to be conveyed.

The Company further covenants and agrees to and with the Trustees and their successors in said trust under the Mortgage, as follows:

ARTICLE I.

Fifteenth Series of Bonds.

SECTION 1.01. There shall be a series of bonds designated "10.35% Series due November 1, 1997" (herein sometimes referred to as the "Fifteenth Series"), each of which shall also bear the descriptive title First Mortgage Bond, and the form thereof, which shall be established by Resolution of the Board of Directors of the Company, shall contain suitable provisions with respect to the matters hereinafter in this Section specified. Bonds of the Fifteenth Series shall be limited to \$15,000,000, in aggregate principal amount at any one time Outstanding except as provided in Section 16 of the Mortgage and shall mature on November 1, 1997, and shall be issued as fully registered bonds in denominations of One Thousand Dollars and, at the option of the Company, in any multiple or multiples of One Thousand Dollars (the exercise of such option to be evidenced by the execution and delivery thereof). Bonds of the Fifteenth Series shall bear interest at the rate of 10.35% per annum, payable semi-annually on May 1 and November 1 of each year; and the principal of, premium, if any, and interest on each said bond shall be payable at the office or agency of the Company in the Borough of Manhattan, The City of New York, in such coin or currency of the United States of America as at the time of payment is legal tender for public and private debts.

Bonds of the Fifteenth Series shall be dated as in Section 10 of the Mortgage provided.

Bonds of the Fifteenth Series shall be redeemable either at the option of the Company or pursuant to the requirements of the Mortgage in whole at any time, or in part from time to time, prior to maturity, upon notice, as provided in Section 52 of the Mortgage, mailed at least thirty (30) days prior to the date fixed for redemption, at the following general redemption prices, expressed in percentages of the principal amount of the bonds to be redeemed:

GENERAL REDEMPTION PRICES

If redeemed during the 12 months period ending October 31,

1986.....	109.35%	1992.....	103.74%
1987.....	108.42%	1993.....	102.81%
1988.....	107.48%	1994.....	101.87%
1989.....	106.55%	1995.....	100.94%
1990.....	105.61%	1996.....	100.00%
1991.....	104.68%	1997.....	100.00%

in each case, together with accrued interest to the date fixed for redemption; provided, however, that no bonds of the Fifteenth Series may be redeemed at said general redemption prices prior to November 1, 1990, as part of any refunding operation involving, directly or indirectly, the incurring of indebtedness by the Company having a cost (calculated in accordance with acceptable financial practice) lower than 10.60% per annum.

Bonds of the Fifteenth Series shall also be redeemable in whole at any time, or in part from time to time, prior to maturity, upon like notice, by the application (either at the option of the Company or pursuant to the requirements of the Mortgage) of cash deposited with the Corporate Trustee pursuant to the provisions of Section 64 of the Mortgage (so long as any bonds of the Sixth, Seventh, Eighth or Tenth Series remain Outstanding) or with the Proceeds of Released Property, at the following special redemption prices, expressed in percentages of the principal amount of the bonds to be redeemed:

SPECIAL REDEMPTION PRICES

If redeemed during the 12 months period ending
October 31,

1986.....	100.00%	1992.....	100.00%
1987.....	100.00%	1993.....	100.00%
1988.....	100.00%	1994.....	100.00%
1989.....	100.00%	1995.....	100.00%
1990.....	100.00%	1996.....	100.00%
1991.....	100.00%	1997.....	100.00%

in each case, together with accrued interest to the date
fixed for redemption.

ARTICLE II.

Exchanges and Transfers of Bonds of the Fifteenth Series.

SECTION 2.01. At the option of the registered
owner, any bonds of the Fifteenth Series, upon surrender
thereof, for cancellation, at the office or agency of the
Company in the Borough of Manhattan, The City of New York,
shall (subject to the provisions of Section 12 of the
Mortgage) be exchangeable for a like aggregate principal
amount of bonds of the same series of other authorized
denominations.

Transfers of bonds of the Fifteenth Series may
be registered (subject to the provisions of Section 12 of
the Mortgage) at the office or agency of the Company in
the Borough of Manhattan, The City of New York or such
other locations as the Company may designate from time to
time.

Upon any registration of transfer or exchange of
bonds of the Fifteenth Series, the Company may make a
charge therefor sufficient to reimburse it for any tax or
taxes required to be paid solely by virtue of such trans-
fer by the Company, as provided in Section 12 of the Mort-
gage, but the Company hereby waives any right to make a
charge in addition thereto for any registration or ex-
change or transfer of bonds of the Fifteenth Series.

ARTICLE III.

Miscellaneous Provisions.

SECTION 3.01. Subject to the amendments provided for in this Fourteenth Supplemental Indenture, the terms defined in the Mortgage, as heretofore supplemented, shall, for all purposes of this Fourteenth Supplemental Indenture, have the meanings specified in the Mortgage, as heretofore supplemented.

SECTION 3.02. The Trustees hereby accept the trusts hereby declared, provided, created or supplemented, and agree to perform the same upon the terms and conditions herein and in the Mortgage, as heretofore supplemented, set forth, including the following:

The Trustees shall not be responsible in any manner whatsoever for or in respect of the validity or sufficiency of this Fourteenth Supplemental Indenture or for or in respect of the recitals contained herein, all of which recitals are made by the Company solely. In general each and every term and condition contained in Article XVII of the Mortgage shall apply to and form part of this Fourteenth Supplemental Indenture with the same force and effect as if the same were herein set forth in full, with such omissions, variations and insertions, if any, as may be appropriate to make the same conform to the provisions of the Fourteenth Supplemental Indenture.

SECTION 3.03. Whenever in this Fourteenth Supplemental Indenture any of the parties hereto is named or referred to, this shall, subject to the provisions of Articles XVI and XVII of the Mortgage, be deemed to include the successors or assigns of such party, and all the covenants and agreements in this Fourteenth Supplemental Indenture contained by or on behalf of the Company or by or on behalf of the Trustees shall bind and inure to the benefit of the respective successors and assigns of such parties whether so expressed or not.

SECTION 3.04. Nothing in this Fourteenth Supplemental Indenture, expressed or implied, is intended, or shall be construed, to confer upon, or to give to, any person, firm or corporation, other than the parties hereto and the holders of the bonds and coupons outstanding under the Mortgage, any right, remedy, or claim under or by reason of this Fourteenth Supplemental Indenture or any covenant, condition, stipulation, promise or agreement hereof, and all the covenants, conditions, stipulations, promises and agreements by or on behalf of the Company as

set forth in this Fourteenth Supplemental Indenture shall be for the sole and exclusive benefit of the parties hereto, and of the holders of the bonds and of the coupons outstanding under the Mortgage.

SECTION 3.05. This Fourteenth Supplemental Indenture has been executed in several identical counterparts, each of which shall be an original and all of which shall constitute but one and the same instrument.

IN WITNESS WHEREOF, Northwest Natural Gas Company, party hereto of the first part, has caused its corporate name to be hereunto affixed, and this instrument to be signed and sealed by its President or one of its Vice Presidents, and its corporate seal to be attested by its Secretary or one of its Assistant Secretaries for and in its behalf on the 22nd day of November 1985, as of November 1, 1985, in Portland, Oregon; Bankers Trust Company, one of the parties hereto of the second part, has caused its corporate name to be hereunto affixed, and this instrument to be signed and sealed by one of its Vice Presidents or one of its Assistant Vice Presidents and its corporate seal to be attested by one of its Assistant Secretaries; and Stanley Burg, one of the parties hereto of the second part, has hereunto set his hand and affixed his seal, all in The City of New York, on the 26th day of November 1985, as of November 1, 1985.

NORTHWEST NATURAL GAS COMPANY

[Corporate Seal]

By Robert L. Ridgley
President

Attest:

C. J. Rue
Secretary

Executed, sealed and delivered
by NORTHWEST NATURAL GAS COM-
PANY in the presence of:

W. E. Radford

Leslie K. Alldrin

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BANKERS TRUST COMPANY, as Trustee,

[Corporate Seal]

By Joan M. Morgan
Vice President

Attest:

Lloyd McKenzie
Assistant Secretary

Stanley Burg
STANLEY BURG, as Trustee

Executed, sealed and delivered
by BANKERS TRUST COMPANY and
STANLEY BURG in the presence
of:

Gail Violick Boylan

Shirley R. West

STATE OF OREGON)
 : ss.:
COUNTY OF MULTNOMAH)

November 22, A.D. 1985.

Before me personally appeared ROBERT L. RIDGLEY, who, being duly sworn, did say that he is President of NORTHWEST NATURAL GAS COMPANY and that the seal affixed to the foregoing instrument is the corporate seal of said Corporation and that said instrument was signed and sealed in behalf of said Corporation by authority of its Board of Directors; and he acknowledged said instrument to be its voluntary act and deed.

On this 22nd day of November 1985, before me personally appeared ROBERT L. RIDGLEY, to me known to be President of NORTHWEST NATURAL GAS COMPANY, one of the corporations that executed the within and foregoing instrument, and acknowledged said instrument to be the free and voluntary act and deed of said Corporation, for the uses and purposes therein mentioned, and on oath stated that he was authorized to execute said instrument and that the seal affixed is the corporate seal of said Corporation.

IN WITNESS WHEREOF I have hereunto set my hand and affixed my official seal the day and year first above written.

Virginia M. Vance
Notary Public, State of Oregon
My Commission Expires 3/24/87

[Notarial Seal]

STATE OF NEW YORK)
 : ss.:
COUNTY OF NEW YORK)

November 26, A.D. 1985.

Before me personally appeared JOAN M. MORGAN, who, being duly sworn, did say that she is a Vice President of BANKERS TRUST COMPANY and that the seal affixed to the foregoing instrument is the corporate seal of said Corporation and that said instrument was signed and sealed in behalf of said Corporation by authority of its Board of Directors; and she acknowledged said instrument to be its voluntary act and deed.

On this 26th day of November 1985, before me personally appeared JOAN M. MORGAN, to me known to be a Vice President of BANKERS TRUST COMPANY, one of the corporations that executed the within and foregoing instrument, and acknowledged said instrument to be the free and voluntary act and deed of said Corporation, for the uses and purposes therein mentioned, and on oath stated that she was authorized to execute said instrument and that the seal affixed is the corporate seal of said Corporation.

IN WITNESS WHEREOF I have hereunto set my hand and affixed my official seal the day and year first above written.

Valerie Ann Hedberg
Valerie Ann Hedberg
Notary Public, State of New York
No. 31-4836412
Qualified in New York County
Commission Expires March 30, 1987

[Notarial Seal]

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STATE OF NEW YORK)
 : ss.:
COUNTY OF NEW YORK)

November 26, A.D. 1985.

Before me personally appeared the above-named STANLEY BURG and acknowledged the foregoing instrument to be his voluntary act and deed.

On this day personally appeared before me STANLEY BURG to me known to be the individual described in and who executed the within and foregoing instrument, and acknowledged that he signed the same as his free and voluntary act and deed, for the uses and purposes therein mentioned.

Given under my hand and official seal this 26th day of November, 1985.

Valerie Ann Hedberg
Valerie Ann Hedberg
Notary Public, State of New York
No. 31-4836412
Qualified in New York County
Commission Expires March 31, 1987

[Notarial Seal]

SUMMARY OF RECORDING DATA
IN THE STATE OF OREGON
Real Property Mortgage Records

<u>Counterpart No.</u>	<u>County</u>	<u>Date Recorded</u>	<u>Book, Film or Reel</u>	<u>Page</u>
10	Benton	December 10, 1985	M-72799-85	-
11	Clackamas	December 10, 1985	8543580	-
12	Clatsop	December 10, 1985	648	268
13	Columbia	December 10, 1985	193	990
14	Coos	December 10, 1985	85-5-6578	-
15	Douglas	December 10, 1985	933	243
16	Hood River	December 10, 1985	852267	-
31	Lane	January 31, 1986	1386R	-
18	Lincoln	December 10, 1985	166	2385
19	Linn	December 10, 1985	399	500
20	Marion	December 10, 1985	431	294
21	Multnomah	December 10, 1985	1870	308
22	Polk	December 11, 1985	191	472
23	Tillamook	December 10, 1985	301	588
24	Wasco	December 10, 1985	852802	-
25	Washington	December 10, 1985	85048868	-
26	Yamhill	December 11, 1985	199	1339

-19-

Filed as a Financing Statement

<u>Counterpart No.</u>	<u>Office</u>	<u>Date Filed for Record</u>	<u>File No.</u>
8	Secretary of State	December 10, 1985	K 20799

IN THE STATE OF WASHINGTON

Real Property Mortgage Records

<u>Counterpart No.</u>	<u>County</u>	<u>Date Recorded</u>	<u>Book, Film or Reel</u>	<u>Page</u>
28	Clark	December 11, 1985	85-12110068	-
29	Klickitat	December 10, 1985	136	660
30	Skamania	December 11, 1985	62	284

Filed as a Financing Statement

<u>Counterpart No.</u>	<u>Office</u>	<u>Date Filed for Record</u>	<u>File No.</u>
27	Secretary of State	December 10, 1985	85-345-0000

[Conformed Copy]

NORTHWEST NATURAL GAS COMPANY

TO

BANKERS TRUST COMPANY

AND

STANLEY BURG (SUCCESSOR TO R. G. PAGE AND J. C. KENNEDY),

As Trustees under the Mortgage and
Deed of Trust, dated as of July 1,
1946, of Portland Gas & Coke Company
(now Northwest Natural Gas Company)

FIFTEENTH SUPPLEMENTAL INDENTURE

providing among other things for

First Mortgage Bonds, 9 3/8% Series due 2011

Dated as of July 1, 1986

FIFTEENTH SUPPLEMENTAL INDENTURE

INDENTURE, dated as of the 1st day of July, 1986, made and entered into by and between NORTHWEST NATURAL GAS COMPANY (formerly Portland Gas & Coke Company), a corporation of the State of Oregon, whose post office address is One Pacific Square, 220 N.W. Second Avenue, Portland, Oregon 97209 (hereinafter sometimes called the Company), party of the first part, and BANKERS TRUST COMPANY, a corporation of the State of New York, whose post office address is One Bankers Trust Plaza, New York, New York 10005 (hereinafter sometimes called the Corporate Trustee) and STANLEY BURG (successor to R. G. PAGE and J. C. KENNEDY), whose post office address is 23 Dover Green, Staten Island, New York 10312 (hereinafter sometimes called the Co-Trustee), parties of the second part (the Corporate Trustee and the Co-Trustee being hereinafter together sometimes called the Trustees), as Trustees under the Mortgage and Deed of Trust, dated as of July 1, 1946 (hereinafter called the Mortgage), executed and delivered by Portland Gas & Coke Company (now Northwest Natural Gas Company) to secure the payment of bonds issued or to be issued under and in accordance with the provisions of the Mortgage, this indenture (hereinafter called Fifteenth Supplemental Indenture) being supplemental thereto;

WHEREAS the Mortgage was or is to be recorded in the official records of various counties in the States of Oregon and Washington which counties include or will include all counties in which this Fifteenth Supplemental Indenture is to be recorded; and

WHEREAS by the Mortgage the Company covenanted that it would execute and deliver such supplemental indenture or indentures and such further instruments and do such further acts as might be necessary or proper to carry out more effectually the purposes of the Mortgage and to make subject to the lien of the Mortgage any property thereafter acquired, made or constructed and intended to be subject to the lien thereof; and

WHEREAS the Company executed and delivered to the Trustees its First Supplemental Indenture, dated as of June 1, 1949 (hereinafter called its First Supplemental Indenture), its Second Supplemental Indenture, dated as of March 1, 1954 (hereinafter called its Second Supplemental Indenture), its Third Supplemental Indenture, dated as of April 1, 1956 (hereinafter called its Third Supplemental Indenture), its Fourth Supplemental Indenture, dated as of February 1, 1959 (hereinafter called its Fourth Supple-

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mental Indenture), its Fifth Supplemental Indenture, dated as of July 1, 1961 (hereinafter called its Fifth Supplemental Indenture), its Sixth Supplemental Indenture, dated as of January 1, 1964 (hereinafter called its Sixth Supplemental Indenture), its Seventh Supplemental Indenture, dated as of March 1, 1966 (hereinafter called its Seventh Supplemental Indenture), its Eighth Supplemental Indenture, dated as of December 1, 1969 (hereinafter called its Eighth Supplemental Indenture), its Ninth Supplemental Indenture, dated as of April 1, 1971 (hereinafter called its Ninth Supplemental Indenture), its Tenth Supplemental Indenture, dated as of January 1, 1975 (hereinafter called its Tenth Supplemental Indenture), its Eleventh Supplemental Indenture, dated as of December 1, 1975 (hereinafter called its Eleventh Supplemental Indenture), its Twelfth Supplemental Indenture, dated as of July 1, 1981 (hereinafter called its Twelfth Supplemental Indenture) and its Thirteenth Supplemental Indenture, dated as of June 1, 1985 (hereinafter called its Thirteenth Supplemental Indenture); and

WHEREAS said First through Thirteenth Supplemental Indentures were filed for record, and were recorded and indexed, as a mortgage of both real and personal property, in the official records of various counties in the States of Oregon and Washington which counties include or will include all counties in which this Fifteenth Supplemental Indenture is to be recorded; and

WHEREAS the Company executed and delivered to the Trustees its Fourteenth Supplemental Indenture, dated as of November 1, 1985 (hereinafter called its Fourteenth Supplemental Indenture); and

WHEREAS said Fourteenth Supplemental Indenture was filed for record, and was recorded and indexed, as a mortgage of both real and personal property, and financing statements were filed, in the official records of the several counties and other offices in the States of Oregon and Washington listed below, as follows:

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OREGON

Real Property Mortgage Records

<u>County</u>	<u>Date Recorded</u>	<u>Book, Film or Reel</u>	<u>Page</u>
Benton	December 10, 1985	M-72799-85	-
Clackamas	December 10, 1985	8543580	-
Clatsop	December 10, 1985	648	268
Columbia	December 10, 1985	193	990
Coos	December 10, 1985	85-5-6578	-
Douglas	December 10, 1985	933	243
Hood River	December 10, 1985	852267	-
Lane	January 31, 1986	1386R	-
Lincoln	December 10, 1985	166	2385
Linn	December 10, 1985	399	500
Marion	December 10, 1985	431	294
Multnomah	December 10, 1985	1870	308
Polk	December 11, 1985	191	472
Tillamook	December 10, 1985	301	588
Wasco	December 10, 1985	852802	-
Washington	December 10, 1985	85048868	-
Yamhill	December 11, 1985	199	1339

Filed as a Financing Statement

<u>Office</u>	<u>Date Filed for Record</u>	<u>File No.</u>
Secretary of State	December 10, 1985	K 20799

WASHINGTON

Real Property Mortgage Records

<u>County</u>	<u>Date Recorded</u>	<u>Book, Film or Reel</u>	<u>Page</u>
Clark	December 11, 1985	85-12110068	-
Klickitat	December 10, 1985	136	660
Skamania	December 11, 1985	62	284

Filed as a Financing Statement

<u>Office</u>	<u>Date Filed for Record</u>	<u>File Number</u>
Secretary of State	December 10, 1985	85-345-0000

; and

WHEREAS an instrument dated as of June 14, 1951, was executed by the Company appointing J. C. Kennedy as Co-Trustee in succession to said R. G. Page (resigned) under the Mortgage and by J. C. Kennedy accepting the appointment as Co-Trustee under the Mortgage in succession to the said R. G. Page, which instrument was recorded in various counties in the States of Oregon and Washington; and

WHEREAS, in the Ninth Supplemental Indenture STANLEY BURG was appointed by the Company as Co-Trustee under the Mortgage in succession to said J. C. KENNEDY (resigned) and in the Ninth Supplemental Indenture Stanley Burg accepted such appointment as Co-Trustee under the Mortgage in succession to said J. C. Kennedy; and

WHEREAS in addition to the property described in the Mortgage, as heretofore supplemented, the Company has acquired certain other property, rights and interests in property; and

WHEREAS, the Company has heretofore issued, in accordance with the provisions of the Mortgage, as supplemented, the following series of First Mortgage Bonds:

<u>Series</u>	<u>Principal Amount Outstanding at the Close of Business July 1, 1986</u>
3-1/8% Series due 1976.....	None
3-7/8% Series due 1974.....	None
4 % Series due 1974.....	None
4-3/8% Series due 1976.....	None
5-1/8% Series due 1984.....	None
5-1/8% Series due 1986.....	None
4-3/4% Series due 1989.....	\$ 4,230,000
5-3/4% Series due 1991.....	\$10,330,000
9-3/8% Series due 1974.....	None
8-5/8% Series due 1996.....	\$13,400,000
12 % Series due 1984.....	None
10-1/2% Series due 1986.....	None
14-3/4% Series due 1989.....	None
10-1/8% Series due 1995.....	\$15,000,000
10.35% Series due November 1, 1997.....	\$15,000,000

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; and

WHEREAS Section 8 of the Mortgage provides that the form of each series of bonds (other than the First Series) issued thereunder shall be established by Resolution of the Board of Directors of the Company; that the form of such series, as established by said Board of Directors, shall specify the descriptive title of the bonds and various other terms thereof; and that such Series may also contain such provisions not inconsistent with the provisions of the Mortgage as the Board of Directors may, in its discretion, cause to be inserted therein expressing or referring to the terms and conditions upon which such bonds are to be issued and/or secured under the Mortgage; and

WHEREAS Section 120 of the Mortgage provides, among other things, that any power, privilege or right expressly or impliedly reserved to or in any way conferred upon the Company by any provision of the Mortgage, whether such power, privilege or right is in any way restricted or is unrestricted, may (to the extent permitted by law) be in whole or in part waived or surrendered or subjected to any restriction if at the time unrestricted or to additional restriction if already restricted, and the Company may enter into any further covenants, limitations or restrictions for the benefit of any one or more series of bonds issued thereunder, or the Company may cure any ambiguity contained therein or in any supplemental indenture or may (in lieu of establishment by Resolution as provided in Section 8 of the Mortgage) establish the terms and provisions of any series of bonds other than said First Series, by an instrument in writing executed and acknowledged by the Company in such manner as would be necessary to entitle a conveyance of real estate to record in all of the states in which any property at the time subject to the lien of the Mortgage shall be situated; and

WHEREAS the Company now desires to create a new series of bonds and (pursuant to the provisions of Section 120 of the Mortgage) to add to its covenants and agreements contained in the Mortgage, as heretofore supplemented, certain other covenants and agreements to be observed by it and to alter and amend in certain respects the covenants and provisions contained in the Mortgage, as heretofore supplemented and amended; and

WHEREAS the execution and delivery by the Company of this Fifteenth Supplemental Indenture, and the terms of the bonds of the Sixteenth Series hereinafter referred to, have been duly authorized by the Board of

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Directors of the Company by appropriate resolutions of said Board of Directors;

NOW, THEREFORE, THIS INDENTURE WITNESSETH:

That Northwest Natural Gas Company, in consideration of the premises and of One Dollar to it duly paid by the Trustees at or before the ensembling and delivery of these presents, the receipt whereof is hereby acknowledged, and in further assurance of the estate, title and rights of the Trustees, and in order further to secure the payment both of the principal of and interest and premium, if any, on the bonds from time to time issued under the Mortgage, according to their tenor and effect, and the performance of all the provisions of the Mortgage (including any instruments supplemental thereto and any modification made as in the Mortgage provided) and of said bonds, hereby grants, bargains, sells, releases, conveys, assigns, transfers, mortgages, pledges, sets over and confirms (subject, however, to Excepted Encumbrances, as defined in Section 6 of the Mortgage) unto Stanley Burg and (to the extent of its legal capacity to hold the same for the purposes hereof) to Bankers Trust Company, as Trustees under the Mortgage, and to their successor or successors in said trust, and to said Trustees and their successors and assigns forever, all property, real, personal and mixed, acquired by the Company after the date of the Mortgage, of the kind or nature specifically mentioned in Article XXI of the Mortgage or of any other kind or nature (except any herein or in the Mortgage expressly excepted) now owned or, subject to the provisions of subsection (I) of Section 87 of the Mortgage, hereafter acquired by the Company (by purchase, consolidation, merger, donation, construction, erection or in any other way) and wheresoever situated, including (without in anywise limiting or impairing by the enumeration of the same the scope and intent of the foregoing) all lands, gas plants, by-product plants, gas holders, gas mains and pipes; all power sites, water rights, reservoirs, canals, raceways, dams, aqueducts, and all other rights or means for appropriating, conveying, storing and supplying water; all rights of way and roads; all plants for the generation of electricity by steam, water and/or other power; all power houses, street lighting systems, standards and other equipment incidental thereto, telephone, radio, television and air-conditioning systems and equipment incidental thereto, water works, water systems, steam heat and hot water plants, substations, lines, service and supply systems, bridges, culverts, tracts, ice or refrigeration plants and equipment, offices, buildings and other structures and the equipment thereof; all machinery, engines, boilers, dynamos, gas,

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electric and other machines, regulators, meters, transformers, generators, motors, gas, electrical and mechanical appliances, conduits, cables, gas, water, steam heat or other pipes, service pipes, fittings, valves and connections, pole and transmission lines, wires, cables, tools, implements, apparatus, furniture and chattels; all franchises, consents or permits; all lines for the transmission and distribution of gas, electric current, steam heat or water for any purpose including mains, pipes, conduits, towers, poles, wires, cables, ducts and all apparatus for use in connection therewith; all real estate, lands, easements, servitudes, licenses, permits, franchises, privileges, rights of way and other rights in or relating to public or private property, real or personal, or the occupancy of such property and (except as herein or in the Mortgage, as heretofore supplemented, expressly excepted) all right, title and interest the Company may now have or may hereafter acquire in and to any and all property of any kind or nature wheresoever situated.

TOGETHER WITH all and singular the tenements, hereditaments, prescriptions, servitudes and appurtenances belonging or in anywise appertaining to the aforementioned property or any part thereof, with the reversion and reversions, remainder and remainders and (subject to the provisions of Section 57 of the Mortgage) the tolls, rents, revenues, issues, earnings, income, product and profits thereof, and all the estate, right, title and interest and claim whatsoever, at law as well as in equity, which the Company now has or may hereafter acquire in and to the aforementioned property and franchises and every part and parcel thereof.

IT IS HEREBY AGREED by the Company that, subject to the provisions of subsection (I) of Section 87 of the Mortgage, all the property, rights, and franchises acquired by the Company (by purchase, consolidation, merger, donation, construction, erection or in any other way) after the date hereof, except any herein or in the Mortgage, as heretofore supplemented, expressly excepted, shall be and are as fully granted and conveyed hereby and by the Mortgage, and as fully embraced within the lien hereof and the lien of the Mortgage, as supplemented, as if such property, rights and franchises were now owned by the Company and were specifically described herein or in the Mortgage, as heretofore supplemented, and conveyed hereby or thereby. Provided that the following are not and are not intended to be now or hereafter granted, bargained, sold, released, conveyed, assigned, transferred, mortgaged, pledged, set over or confirmed hereunder and are hereby expressly excepted from the lien and operation

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of this Fifteenth Supplemental Indenture and from the lien and operation of the Mortgage, as heretofore supplemented, viz: (1) cash, shares of stock, bonds, notes and other obligations and other securities not hereafter specifically pledged, paid, deposited, delivered or held under the Mortgage, as heretofore supplemented, or covenanted so to be; (2) merchandise, equipment, apparatus, materials or supplies held for the purpose of sale or other disposition in the usual course of business; fuel, oil and similar materials and supplies consumable in the operation of any of the properties of the Company; all aircraft, tractors, rolling stock, trolley coaches, buses, motor coaches, automobiles, motor trucks, and other vehicles and materials and supplies held for the purpose of repairing or replacing (in whole or in part) any of the same; (3) bills, notes and accounts receivable, judgments, demands and choses in action, and all contracts, leases and operating agreements not specifically pledged under the Mortgage, as heretofore supplemented, or covenanted so to be; (4) the last day of the term of any lease or leasehold which may be or become subject to the lien of the Mortgage; (5) gas, petroleum, carbon, chemicals, light oils, tar products, electric energy, steam, water, ice, and other materials or products, manufactured, stored, generated, produced, purchased or acquired by the Company for sale, distribution or use in the ordinary course of its business; all timber, minerals, mineral rights and royalties and all Natural Gas and Oil Production Property, as defined in Section 4 of the Mortgage; and (6) the Company's franchise to be a corporation; provided, however, that the property and rights expressly excepted from the lien and operation of this Fifteenth Supplemental Indenture and from the lien and operation of the Mortgage, as heretofore supplemented, in the above subdivisions (2) and (3) shall (to the extent permitted by law) cease to be so excepted in the event and as of the date that either or both of the Trustees or a receiver or trustee shall enter upon and take possession of the Mortgaged and Pledged Property in the manner provided in Article XIII of the Mortgage by reason of the occurrence of a Default as defined in Section 65 thereof.

TO HAVE AND TO HOLD all such properties, real, personal and mixed, granted, bargained, sold, released, conveyed, assigned, transferred, mortgaged, pledged, set over or confirmed by the Company as aforesaid, or intended so to be, unto Stanley Burg and (to the extent of its legal capacity to hold the same for the purposes hereof) to Bankers Trust Company, as Trustees, and their successors and assigns forever.

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IN TRUST NEVERTHELESS, for the same purposes and upon the same terms, trusts and conditions and subject to and with the same provisos and covenants as are set forth in the Mortgage, as heretofore supplemented, this Fifteenth Supplemental Indenture being supplemental thereto.

AND IT IS HEREBY COVENANTED by the Company that all the terms, conditions, provisos, covenants and provisions contained in the Mortgage, as heretofore supplemented, shall affect and apply to the property hereinbefore described and conveyed, and to the estates, rights, obligations and duties of the Company and the Trustees and the beneficiaries of the trust with respect to said property, and to the Trustees and their successors in the trust, in the same manner and with the same effect as if the said property had been owned by the Company at the time of the execution of the Mortgage, and had been specifically and at length described in and conveyed to said Trustees by the Mortgage as a part of the property therein stated to be conveyed.

The Company further covenants and agrees to and with the Trustees and their successors in said trust under the Mortgage, as follows:

ARTICLE I.

Sixteenth Series of Bonds.

SECTION 1.01. There shall be a series of bonds designated "9 3/8% Series due 2011" (herein sometimes referred to as the "Sixteenth Series"), each of which shall also bear the descriptive title First Mortgage Bond, and the form thereof, which shall be established by Resolution of the Board of Directors of the Company, shall contain suitable provisions with respect to the matters hereinafter in this Section specified. Bonds of the Sixteenth Series shall be limited to \$50,000,000, in aggregate principal amount at any one time Outstanding except as provided in Section 16 of the Mortgage and shall mature on July 1, 2011, and shall be issued as fully registered bonds in denominations of One Thousand Dollars and, at the option of the Company, in any multiple or multiples of One Thousand Dollars (the exercise of such option to be evidenced by the execution and delivery thereof). Bonds of the Sixteenth Series shall bear interest at the rate of 9 3/8% per annum, payable semi-annually on January 1 and July 1 of each year; and the principal of, premium, if any, and interest on each said bond shall be payable at the office or agency of the Company in the Borough of

Manhattan, The City of New York, in such coin or currency of the United States of America as at the time of payment is legal tender for public and private debts. Bonds of the Sixteenth Series shall be dated as in Section 10 of the Mortgage provided.

(I) Bonds of the Sixteenth Series shall be redeemable either at the option of the Company or pursuant to the requirements of the Mortgage in whole at any time, or in part from time to time, prior to maturity, upon notice, as provided in Section 52 of the Mortgage, mailed at least thirty (30) days prior to the date fixed for redemption, at the following general redemption prices, expressed in percentages of the principal amount of the bonds to be redeemed:

GENERAL REDEMPTION PRICES

If redeemed during the 12 months period ending
 June 30,

1987.....	108.63%	2000.....	103.02%
1988.....	108.19%	2001.....	102.59%
1989.....	107.76%	2002.....	102.16%
1990.....	107.33%	2003.....	101.72%
1991.....	106.90%	2004.....	101.29%
1992.....	106.47%	2005.....	100.86%
1993.....	106.04%	2006.....	100.43%
1994.....	105.61%	2007.....	100.00%
1995.....	105.17%	2008.....	100.00%
1996.....	104.74%	2009.....	100.00%
1997.....	104.31%	2010.....	100.00%
1998.....	103.88%	2011.....	100.00%
1999.....	103.45%		

in each case, together with accrued interest to the date fixed for redemption; provided, however, that no bonds of the Sixteenth Series may be redeemed pursuant to this subdivision (I) prior to July 1, 1991 as part of any refunding operation involving, directly or indirectly, the incurring of indebtedness by the Company having a cost (calculated in accordance with acceptable financial practice) lower than 9.531% per annum.

(II) Bonds of the Sixteenth Series shall also be redeemable in whole at any time, or in part from time to time, prior to maturity, upon like notice, by the application (either at the option of the Company or pursuant to the requirements of the Mortgage) of cash deposited with the Corporate Trustee pursuant to the

provisions of Section 64 of the Mortgage or of Section 2 hereof or with the Proceeds of Released Property; provided, however, that in the case of application of cash deposited with the Corporate Trustee pursuant to the provisions of Section 2 hereof, if the date fixed for such redemption shall be prior to January 1 of the calendar year in which such deposit of cash shall become due under the provisions of Section 2 hereof, they shall be redeemable at the general redemption prices set forth in subdivision (I) of this Section, together with accrued interest to the date fixed for redemption; and provided further, that

(1) in the case of application of cash deposited with the Corporate Trustee pursuant to the provisions of Section 2 hereof if the date fixed for such redemption shall be on or after January 1 of the calendar year in which such deposit of cash shall become due in accordance with the Total Special Redemption Fund Requirement for said calendar year, or

(2) in the case of redemption by the application of cash deposited with the Corporate Trustee pursuant to the provisions of Section 64 of the Mortgage or with the Proceeds of Released Property,

they shall be redeemable at the following special redemption prices, expressed in percentages of the principal amount of the bonds to be redeemed:

SPECIAL REDEMPTION PRICES

If redeemed during the 12 months period ending
 June 30,

1987.....	100.00%	2000.....	100.00%
1988.....	100.00%	2001.....	100.00%
1989.....	100.00%	2002.....	100.00%
1990.....	100.00%	2003.....	100.00%
1991.....	100.00%	2004.....	100.00%
1992.....	100.00%	2005.....	100.00%
1993.....	100.00%	2006.....	100.00%
1994.....	100.00%	2007.....	100.00%
1995.....	100.00%	2008.....	100.00%
1996.....	100.00%	2009.....	100.00%
1997.....	100.00%	2010.....	100.00%
1998.....	100.00%	2011.....	100.00%
1999.....	100.00%		

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in each case, together with accrued interest to the date fixed for redemption.

(III) At the option of the registered owner, any bonds of the Sixteenth Series, upon surrender thereof, for cancellation, at the office or agency of the Company in the Borough of Manhattan, The City of New York, shall (subject to the provisions of Section 12 of the Mortgage) be exchangeable for a like aggregate principal amount of bonds of the same series of other authorized denominations.

Transfers of bonds of the Sixteenth Series may be registered (subject to the provisions of Section 12 of the Mortgage) at the office or agency of the Company in the Borough of Manhattan, The City of New York.

Upon any registration of transfer or exchange of bonds of the Sixteenth Series, the Company may make a charge therefor sufficient to reimburse it for any tax or taxes or other governmental charge, as provided in Section 12 of the Mortgage, but the Company hereby waives any right to make a charge in addition thereto for any registration or exchange or transfer of bonds of the Sixteenth Series.

ARTICLE II.

Special Redemption Fund for Bonds of the Sixteenth Series

Section 2. The Company covenants that, unless all bonds of the Sixteenth Series shall have ceased to be Outstanding, it will, as a Special Redemption Fund for the retirement of bonds of the Sixteenth Series, deliver to the Corporate Trustee an amount in cash and/or principal amount of bonds of the Sixteenth Series, on July 1 of each year, beginning with the year 1991 to and including the year 2010, equal to the Total Special Redemption Fund Requirement for said calendar year. The term "Total Special Redemption Fund Requirement" shall mean for any calendar year \$2,000,000 in cash and/or principal amount of bonds of the Sixteenth Series (herein called the "Mandatory Special Redemption Fund Requirement") plus the Optional Special Redemption Fund Payment, if any, for such calendar year. The term "Optional Special Redemption Fund Payment" shall mean, for any calendar year, any amount, not in excess of \$2,000,000 in cash and/or principal amount of bonds of the Sixteenth Series, that the Company elects to add to the Special Redemption Fund for such calendar year. At the option of the Company, Optional Special Redemption

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Fund Payments may (at any time after they are made) be applied (to the extent not theretofore so applied) in whole or in part from time to time, to reduce Mandatory Special Redemption Fund Requirements for subsequent years upon written notice to the Corporate Trustee.

The Company, at its option (as evidenced by a written order of its Vice President-Finance, its Treasurer or an Assistant Treasurer delivered to the Corporate Trustee directing such credit), shall be credited against any of the requirements of this Section with the aggregate principal amount of any bond(s) of the Sixteenth Series (a) which are not then being and have not theretofore been delivered to meet the requirements of this Section, (b) which have been purchased or redeemed and cancelled or for the purchase or redemption of which moneys in the necessary amount shall be held by the Corporate Trustee with irrevocable direction so to apply the same (provided that any such purchase or redemption shall have been, or is to be, effected otherwise than with cash deposited under the provisions of Section 64 of the Mortgage or with cash which, after giving effect to the provisions of Section 61 of the Mortgage, is then deemed to be or to have been Funded Cash, and, in the case of redemption, the notice required therefor shall have been given or have been provided for to the satisfaction of the Corporate Trustee) and (c) which have not theretofore been made the basis under any of the provisions of the Mortgage for the authentication and delivery of bonds, the withdrawal of cash or the release of property or the basis of a credit under the provisions of this Section (subject to the provisions of Sections 59 and 61 of the Mortgage, permitting the revocation of the waiver of the right to the authentication and delivery of bonds).

Except as hereinafter specifically prohibited by this paragraph, and notwithstanding any other provisions of this Fifteenth Supplemental Indenture, (i) the Company shall be permitted from time to time to anticipate in whole or in part the Total Special Redemption Fund Requirement becoming due on July 1 of the then current year or the mandatory sinking fund requirement becoming due on July 1 of any subsequent year or years, by depositing cash and/or a principal amount of bonds of the Sixteenth Series with the Corporate Trustee in full satisfaction or in partial satisfaction of the requirements of this Section, and (ii) any cash deposited under this Section, whether in full satisfaction or in partial satisfaction of the requirements of this Section and whether becoming due on July 1 of the then current year or of a subsequent year, shall be applied by the Corporate Trustee

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from time to time, as the Company may request, to the purchase of bonds of the Sixteenth Series, at public or private sale, provided, however, that the Corporate Trustee, before making any purchases of bonds as so provided shall by mail notify all registered owners of bonds of the Sixteenth Series of the amount of cash to be applied to the purchase of such bonds and request tenders of bonds by a specified date, and on or after such date the Corporate Trustee, to the extent, as nearly as is possible, of the cash so to be applied, shall purchase the bonds so tendered at the price or prices (including accrued interest and brokerage, if any) most favorable to the Company but not exceeding the cost of redeeming such bonds on a date forty (40) days after the date of such purchase (including premium, if any, and accrued interest from the interest date next preceding the date of purchase to such redemption date in such cost), and, if more bonds are offered at any specified price than there is cash then available to purchase the same, the Corporate Trustee shall prorate its purchases of bonds at such price as nearly as may be practicable between the owners of bonds offered at such price in proportion to the principal amounts of bonds of the Sixteenth Series registered in the names of the owners offering bonds at such price, or to the redemption of bonds of the Sixteenth Series; provided, however, that if moneys in excess of the sum of Fifty Thousand Dollars (\$50,000) deposited with the Corporate Trustee pursuant to this Section (except moneys which theretofore have been set aside to be applied to the purchase of bonds so tendered or to the redemption of bonds called for redemption) shall have remained on deposit for a period of six calendar months, such moneys so remaining on deposit shall promptly thereafter be applied by the Corporate Trustee to the redemption of bonds of the Sixteenth Series; and provided further that, unless consented to by the holders of a majority in principal amount of bonds of the Sixteenth Series Outstanding at the time of such consent, the Company may not deposit cash prior to July 1, 1991 in anticipation of the requirements of this Section, if the cash so deposited represents a part of a refunding operation involving, directly or indirectly, the incurring of indebtedness by the Company having a cost (calculated in accordance with acceptable financial practice) lower than 9.531% per annum.

Any cash deposited under the provisions of this Section shall not be deemed to be Funded Cash; any bonds of the Sixteenth Series delivered to the Corporate Trustee pursuant to the provisions of this Section shall not be deemed to have been retired by the use of Funded Cash; and with respect to all credits taken under this Section on

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the basis of the purchase or redemption of bonds of the Sixteenth Series, it shall not be deemed that a credit has been taken under the Mortgage on the basis thereof.

Any bonds issued under the Mortgage, delivered to, deposited with or purchased or redeemed by, the Corporate Trustee pursuant to the provisions of this Section, shall forthwith be cancelled by the Corporate Trustee.

The Company shall forthwith from time to time on demand of the Corporate Trustee make further payments pursuant to the provisions of this Section on account of accrued interest, brokerage and premium, if any, on bonds of the Sixteenth Series purchased or redeemed or then to be purchased or redeemed but not in excess of

(AA) the aggregate cost for principal, interest, brokerage and premium, if any, on all bonds theretofore, or then to be, purchased and/or redeemed pursuant to the provisions of this Section

after deducting therefrom

(BB) the aggregate principal amount of all bonds theretofore, and of all bonds then to be, purchased and/or redeemed pursuant to the provisions of this Section plus the aggregate of all such further payments theretofore made pursuant to the provisions of this Section on account of accrued interest, brokerage and/or premium, if any.

ARTICLE III.

Miscellaneous Provisions.

SECTION 3.01. Subject to the amendments provided for in this Fifteenth Supplemental Indenture, the terms defined in the Mortgage, as heretofore supplemented, shall, for all purposes of this Fifteenth Supplemental Indenture, have the meanings specified in the Mortgage, as heretofore supplemented.

SECTION 3.02. The Trustees hereby accept the trusts hereby declared, provided, created or supplemented, and agree to perform the same upon the terms and conditions herein and in the Mortgage, as heretofore supplemented, set forth, including the following:

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The Trustees shall not be responsible in any manner whatsoever for or in respect of the validity or sufficiency of this Fifteenth Supplemental Indenture or for or in respect of the recitals contained herein, all of which recitals are made by the Company solely. In general each and every term and condition contained in Article XVII of the Mortgage shall apply to and form part of this Fifteenth Supplemental Indenture with the same force and effect as if the same were herein set forth in full, with such omissions, variations and insertions, if any, as may be appropriate to make the same conform to the provisions of the Fifteenth Supplemental Indenture.

SECTION 3.03. Whenever in this Fifteenth Supplemental Indenture any of the parties hereto is named or referred to, this shall, subject to the provisions of Articles XVI and XVII of the Mortgage, be deemed to include the successors or assigns of such party, and all the covenants and agreements in this Fifteenth Supplemental Indenture contained by or on behalf of the Company or by or on behalf of the Trustees shall bind and inure to the benefit of the respective successors and assigns of such parties whether so expressed or not.

SECTION 3.04. Nothing in this Fifteenth Supplemental Indenture, expressed or implied, is intended, or shall be construed, to confer upon, or to give to, any person, firm or corporation, other than the parties hereto and the holders of the bonds and coupons outstanding under the Mortgage, any right, remedy, or claim under or by reason of this Fifteenth Supplemental Indenture or any covenant, condition, stipulation, promise or agreement hereof, and all the covenants, conditions, stipulations, promises and agreements by or on behalf of the Company as set forth in this Fifteenth Supplemental Indenture shall be for the sole and exclusive benefit of the parties hereto, and of the holders of the bonds and of the coupons outstanding under the Mortgage.

SECTION 3.05. This Fifteenth Supplemental Indenture has been executed in several identical counterparts, each of which shall be an original and all of which shall constitute but one and the same instrument.

IN WITNESS WHEREOF, Northwest Natural Gas Company, party hereto of the first part, has caused its corporate name to be hereunto affixed, and this instrument to be signed and sealed by its President or one of its Vice Presidents, and its corporate seal to be attested by its Secretary or one of its Assistant Secretaries for and in its behalf on the 26th day of June, 1986, as of July

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1, 1986, in Portland, Oregon; Bankers Trust Company, one of the parties hereto of the second part, has caused its corporate name to be hereunto affixed, and this instrument to be signed and sealed by one of its Vice Presidents or one of its Assistant Vice Presidents and its corporate seal to be attested by one of its Assistant Secretaries; and Stanley Burg, one of the parties hereto of the second part, has hereunto set his hand and affixed his seal, all in The City of New York, on the 27th day of June, 1986, as of July 1, 1986.

NORTHWEST NATURAL GAS COMPANY

[CORPORATE SEAL]

By W. E. Radford
Vice President, Finance
and Treasurer

Attest:

C. J. Rue
Secretary

Executed, sealed and delivered
by NORTHWEST NATURAL GAS COM-
PANY in the presence of:

Virginia M. Vance

Leslie K. Alldrin

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BANKERS TRUST COMPANY, as Trustee,

[CORPORATE SEAL]

By Joan M. Morgan
Vice President

Attest:

Louise A. Buckley
Assistant Secretary

Stanley Burg
STANLEY BURG, as Trustee

Executed, sealed and
delivered by BANKERS TRUST
COMPANY and STANLEY BURG
in the presence of:

Shirley R. West

Andrew A. Steckler

STATE OF OREGON)
): ss.:
COUNTY OF MULTNOMAH)

June 26, A.D. 1986.

Before me personally appeared W. E. RADFORD, who, being duly sworn, did say that he is Vice President, Finance and Treasurer of NORTHWEST NATURAL GAS COMPANY and that the seal affixed to the foregoing instrument is the corporate seal of said Corporation and that said instrument was signed and sealed in behalf of said Corporation by authority of its Board of Directors; and he acknowledged said instrument to be its voluntary act and deed.

On this 26th day of June 1986, before me personally appeared W. E. RADFORD, to me known to be Vice President, Finance and Treasurer of NORTHWEST NATURAL GAS COMPANY, one of the corporations that executed the within and foregoing instrument, and acknowledged said instrument to be the free and voluntary act and deed of said Corporation, for the uses and purposes therein mentioned, and on oath stated that he was authorized to execute said instrument and that the seal affixed is the corporate seal of said Corporation.

IN WITNESS WHEREOF I have hereunto set my hand and affixed my official seal the day and year first above written.

[NOTARIAL SEAL]

Barbara Trautman
Barbara Trautman
Notary Public, State of Oregon
My Commission Expires March 30, 1989

STATE OF NEW YORK)
 : ss.:
COUNTY OF NEW YORK)

June 27, A.D. 1986.

Before me personally appeared JOAN M. MORGAN, who, being duly sworn, did say that she is a Vice President of BANKERS TRUST COMPANY and that the seal affixed to the foregoing instrument is the corporate seal of said Corporation and that said instrument was signed and sealed in behalf of said Corporation by authority of its Board of Directors; and she acknowledged said instrument to be its voluntary act and deed.

On this 27th day of June 1986, before me personally appeared JOAN M. MORGAN, to me known to be a Vice President of BANKERS TRUST COMPANY, one of the corporations that executed the within and foregoing instrument, and acknowledged said instrument to be the free and voluntary act and deed of said Corporation, for the uses and purposes therein mentioned, and on oath stated that she was authorized to execute said instrument and that the seal affixed is the corporate seal of said Corporation.

IN WITNESS WHEREOF I have hereunto set my hand and affixed my official seal the day and year first above written.

[NOTARIAL SEAL]

Valerie Ann Hedberg
Valerie Ann Hedberg
Notary Public, State of New York
No. 31-4836412
Qualified in New York County
Commission Expires March 31, 1987

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STATE OF NEW YORK)
 : ss.:
COUNTY OF NEW YORK)

June 27, A.D. 1986.

Before me personally appeared the above-named STANLEY BURG and acknowledged the foregoing instrument to be his voluntary act and deed.

On this day personally appeared before me STANLEY BURG to me known to be the individual described in and who executed the within and foregoing instrument, and acknowledged that he signed the same as his free and voluntary act and deed, for the uses and purposes therein mentioned.

Given under my hand and official seal this 27th day of June, 1986.

[NOTARIAL SEAL]

Valerie Ann Hedberg
Valerie Ann Hedberg
Notary Public, State of New York
No. 31-4836412
Qualified in New York County
Commission Expires March 31, 1987

SUMMARY OF RECORDING DATA
 IN THE STATE OF OREGON
 Real Property Mortgage Records

<u>Counterpart No.</u>	<u>County</u>	<u>Date Recorded</u>	<u>Book, Film or Reel</u>	<u>Page</u>
11	Benton	July 3, 1986	M-78662-86	-
12	Clackamas	July 7, 1986	86 24733	-
13	Clatsop	July 3, 1986	658	288
14	Columbia	July 3, 1986	197	114
15	Coos	July 7, 1986	86-3-2413	-
16	Douglas	July 3, 1986	951	551
17	Hood River	July 3, 1986	861198	-
18	Lane	July 21, 1986	1411R (#8627177)	-
19	Lincoln	July 7, 1986	172	809
20	Linn	July 3, 1986	414	743
21	Marion	July 3, 1986	472	468
22	Multnomah	July 3, 1986	1918	305
23	Polk	July 3, 1986	195	722
24	Tillamook	July 3, 1986	304	5
25	Wasco	July 3, 1986	861538	-
26	Washington	July 3, 1986	86028953	-
27	Yamhill	July 7, 1986	204	1510

-23-

Filed as a Financing Statement

<u>Counterpart No.</u>	<u>Office</u>	<u>Date Filed for Record</u>	<u>File No.</u>
9	Secretary of State	July 3, 1986	K 52983

IN THE STATE OF WASHINGTON

Real Property Mortgage Records

<u>Counterpart No.</u>	<u>County</u>	<u>Date Recorded</u>	<u>Book, Film or Reel</u>	<u>Page</u>
29	Clark	July 3, 1986	399	1
30	Klickitat	July 3, 1986	138	112
31	Skamania	July 3, 1986	101	752

Filed as a Financing Statement

<u>Counterpart No.</u>	<u>Office</u>	<u>Date Filed for Record</u>	<u>File No.</u>
28	Secretary of State	July 3, 1986	86-188-0036

NORTHWEST NATURAL GAS COMPANY

AND

Centerre Trust Company of St. Louis,
Trustee

INDENTURE

Dated as of January 15, 1987

\$15,000,000

7-1/4% Convertible Debentures
due March 1, 2012

CROSS-REFERENCE TABLE

<u>TIA</u> <u>Section</u>	<u>Indenture</u> <u>Section</u>
310 (a)(1)	8.10
(a)(2)	8.10
(a)(3)	N.A.
(a)(4)	N.A.
(b)	8.08; 8.10; 12.02
(c)	N.A.
311 (a)	8.11
(b)	8.11
(c)	N.A.
312 (a)	2.05
(b)	12.03
(c)	12.03
313 (a)	8.06
(b)(1)	N.A.
(b)(2)	8.06
(c)	12.02
(d)	8.06
314 (a)	5.02; 12.02
(b)	N.A.
(c)(1)	12.04
(c)(2)	12.04
(c)(3)	N.A.
(d)	N.A.
(e)	12.05
(f)	N.A.
315 (a)	8.01(b)
(b)	8.05; 12.02
(c)	8.01(a)
(d)	8.01(c)
(e)	7.11
316 (a)(last sentence)	2.09
(a)(1)(A)	7.05
(a)(1)(B)	7.04
(a)(2)	N.A.
(b)	7.07

<u>TIA Section</u>	<u>Indenture Section</u>
317 (a)(1)	7.08
(a)(2)	7.09
(b)	2.04
318 (a)	12.01

N.A. means Not Applicable.

NOTE: This Cross-Reference Table shall not, for any purpose, be deemed to be a part of the Indenture.

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INDENTURE dated as of January 15, 1987, between NORTHWEST NATURAL GAS COMPANY, an Oregon corporation ("Corporation"), and CENTERRE TRUST COMPANY OF ST. LOUIS, a Missouri corporation ("Trustee").

Each party agrees as follows for the benefit of the other party and for the equal and ratable benefit of the Holders of the Corporation's 7-1/4% Convertible Debentures due 2012 ("Debentures"):

ARTICLE 1 DEFINITIONS AND INCORPORATION BY REFERENCE

Section 1.01. Definitions.

"Affiliate" means any person directly or indirectly controlling or controlled by or under direct or indirect common control with the Corporation.

"Agent" means any Registrar, Paying Agent, Conversion Agent, or co-registrar or agent for service of notices and demands. See Section 2.03.

"Board of Directors" means the Board of Directors of the Corporation or any authorized committee of the Board.

"Board Resolution" means a copy of a resolution certified by the Secretary or an Assistant Secretary of the Corporation to have been duly adopted by the Board of Directors and to be in full force and effect.

"Capital Stock" means any and all shares, interests, participations or other equivalents (however designated) of corporate stock.

"Common Stock" means the common stock, \$3 1/6 par value, of the Corporation as the same exists at the date of this Indenture or as such stock shall be constituted from time to time.

"Corporate Trust Office" means the office of the Trustee located in St. Louis, Missouri, at which at any time its corporate trust business shall be principally administered, which office at the date of execution of this Indenture is located at 510 Locust Street, St. Louis, Missouri 63101, Attention: Corporate Trust Division.

"Corporation" means the party named as such above until a successor replaces it pursuant to the applicable provisions of the Indenture and thereafter means the successor.

"Debenture" means any one of the Debentures described above issued under this Indenture.

"Default" means any event which is, or after notice or passage of time would be, an Event of Default.

"Exchange Act" means the Securities Exchange Act of 1934, as from time to time amended.

"Holder" or "Debentureholder" means a person in whose name a Debenture is registered.

"Indenture" means this Indenture as amended from time to time.

"Officers" means the President, any Vice President, the Treasurer, the Controller, the Secretary, any Assistant Treasurer or any Assistant Secretary of the Corporation.

"Officers' Certificate" means a certificate signed by two Officers, one of whom must be President or a Vice President of the Corporation. See Sections 12.04 and 12.05.

"Opinion of Counsel" means a written opinion from legal counsel who may be an employee of or counsel to the Corporation or the Trustee and who is acceptable to the Trustee. See Sections 12.04 and 12.05.

"Person" means any individual, corporation, partnership, joint venture, association, joint-stock company, trust, unincorporated organization or government or any agency or political subdivision thereof.

"Principal" of the Debenture means the principal amount of the Debenture plus the premium, if any, on the Debenture.

"Qualified Institution" means a member firm of a registered national securities exchange or of the National Association of Securities Dealers, Inc., or a commercial bank or trust company located in the United States.

"Quoted Price" means the last transaction price of the Common Stock as reported on a national securities exchange or a national interdealer automated securities quotation system.

"Redemption Date" when used with respect to any Debenture to be redeemed means the date fixed for such redemption pursuant to this Indenture.

"Redemption Price" when used with respect to any Debenture to be redeemed means the price at which it is to be redeemed pursuant to this Indenture and the Debenture.

"SEC" means the Securities and Exchange Commission.

"Subsidiary" means a corporation at least the majority of whose voting stock is owned by the Corporation or a Subsidiary.

"TIA" means the Trust Indenture Act of 1939 (15 U.S.C. §§77aaa-77bbb) as in effect on the date shown above except as provided in Section 10.03.

"Trustee" means the party named as such above until a successor replaces it pursuant to the applicable provisions of the Indenture and thereafter means the successor.

"Trust Officer" means the Chairman of the Board, the President or any other officer or assistant officer of the Trustee assigned by the Trustee to administer its corporate trust matters.

"United States" means the United States of America.

Section 1.02. Other Definitions.

<u>Term</u>	<u>Defined in Section</u>
"Bankruptcy Law"	7.01
"Called Debenture"	3.08
"Conversion Agent"	2.03
"Conversion Date"	11.02
"Conversion Price"	11.01
"Custodian"	7.01
"Defaulted Interest"	2.12
"Event of Default"	7.01
"Legal Holiday"	12.07
"Paying Agent"	2.03
"Registrar"	2.03
"U.S. Government Obligations"	9.01

Section 1.03. Incorporation by Reference of Trust Indenture Act.

Whenever this Indenture refers to a provision of the TIA, the provision is incorporated by reference in and made a part of this Indenture.

The following TIA terms used in this Indenture have the following meanings:

"indenture securities" means the Debentures.

"indenture securityholder" means a Debentureholder.

"indenture to be qualified" means this Indenture.

"indenture trustee" or "institutional trustee" means the Trustee.

"obligor" on the indenture securities means the Corporation.

All other terms used in this Indenture that are defined by the TIA, defined by TIA reference to another statute or defined by SEC rule under the TIA have the meanings assigned to them.

Section 1.04. Rules of Construction.

Unless the context otherwise requires:

- (1) a term has the meaning assigned to it;
- (2) an accounting term not otherwise defined has the meaning assigned to it in accordance with generally accepted accounting principles;
- (3) "or" is not exclusive;
- (4) words in the singular include the plural, and in the plural include the singular;
- (5) provisions apply to successive events and transactions; and
- (6) "Section" shall refer to a Section of this Indenture.

ARTICLE 2 THE DEBENTURES

Section 2.01. Creation of the Debentures.

There is hereby authorized and created under this Indenture an issue of Debentures, entitled to the benefit of this Indenture, limited in aggregate principal amount to \$15,000,000. The Debentures shall be designated by the title "7-1/4% Convertible Debentures Due 2012." The Debentures shall bear interest, computed on the basis of a 360-day year consisting of twelve 30-day months, from the date of their original issuance, payable semi-annually on March 1 and September 1 of

each year commencing September 1, 1987. The Debentures shall mature, subject to prior redemption, upon the terms and conditions hereinafter set forth, on March 1, 2012.

The Debentures issued hereunder shall be substantially in the form of Exhibit A, which is part of this Indenture. The Debentures may have notations, legends or endorsements required by law, stock exchange rule or usage. Each Debenture shall be dated the date of its authentication.

Section 2.02. Execution and Authentication.

Two Officers shall sign the Debentures for the Corporation by manual or facsimile signature. The Corporation's seal shall be reproduced on the Debenture.

If an Officer whose signature is on a Debenture no longer holds that office at the time the Debenture is authenticated, the Debenture shall nevertheless be valid.

A Debenture shall not be valid until authenticated by the manual signature of the Trustee. The signature shall be conclusive evidence that the Debenture has been authenticated under this Indenture.

The Trustee shall authenticate Debentures for original issue up to the aggregate principal amount of \$15,000,000 upon a written order of the Corporation signed by two Officers. The aggregate principal amount of Debentures outstanding at any time may not exceed that amount except as provided in Section 2.07.

The Trustee may appoint an authenticating agent acceptable to the Corporation to authenticate Debentures. An authenticating agent may authenticate Debentures whenever the Trustee may do so. Each reference in this Indenture to authentication by the Trustee includes authentication by such agent. An authenticating agent has the same rights as an Agent to deal with the Corporation or an Affiliate.

Section 2.03. Registrar, Paying Agent and Conversion Agent.

The Corporation shall maintain an office or agency where Debentures may be presented for registration of transfer or for exchange ("Registrar"), an office or agency where Debentures may be presented for payment ("Paying Agent"), an office or agency where Debentures may be presented for conversion ("Conversion Agent") and an office or agency where notices and demands to or upon the Corporation in respect of the Debentures and this Indenture may be served. The Registrar shall keep a register of the Debentures and of their transfer and exchange. The Corporation may appoint one or more co-registrars, one or more additional paying agents and one or more additional

conversion agents. The Corporation or any Subsidiary may act as Registrar, Paying Agent or Conversion Agent. The term "Paying Agent" includes any additional paying agent and the term "Conversion Agent" includes any additional conversion agent.

The Corporation shall notify the Trustee of the name and address of any Agent not a party to this Indenture. If the Corporation fails to maintain a Registrar, Paying Agent, Conversion Agent or agent for service of notices and demands or fails to give the foregoing notice, the Trustee shall act as such Agent.

The Corporation initially appoints the Centerre Trust Company of St. Louis as Registrar, Paying Agent, Conversion Agent and agent for service of notices and demands.

Section 2.04. Paying Agent to Hold Money in Trust.

The Corporation shall require each Paying Agent other than the Trustee to agree in writing that the Paying Agent will hold in trust for the benefit of Debentureholders or the Trustee all money held by the Paying Agent for the payment of principal or interest on the Debentures, and will notify the Trustee of any Default by the Corporation in making any such payment. While any such Default continues, the Trustee may require a Paying Agent to pay all money held by it to the Trustee. The Corporation at any time may require a Paying Agent to pay all money held by it to the Trustee. Upon payment over to the Trustee, the Paying Agent shall have no further liability for the money. If the Corporation (or any Subsidiary) acts as Paying Agent, it shall segregate and hold as a separate trust fund all money held by it as Paying Agent.

Section 2.05. Debentureholder Lists.

The Trustee shall preserve in as current a form as is reasonably practicable the most recent list available to it of the names and addresses of Debentureholders. If the Trustee is not the Registrar, the Corporation shall furnish to the Trustee on or before each interest payment date and at such other times as the Trustee may request in writing a list of the names and addresses of Debentureholders in such form and as of such date as the Trustee may reasonably require.

Section 2.06. Transfer and Exchange.

When Debentures are presented to the Registrar or a co-registrar with a request to register the transfer or to exchange them for an equal principal amount of Debentures of other denominations, the Registrar shall register the transfer or make the exchange, provided that every Debenture presented or surrendered for registration of transfer or exchange shall

be duly endorsed or be accompanied by a written instrument of transfer in form satisfactory to the Corporation and the Registrar duly executed by the Holder thereof or by his attorney duly authorized in writing. To permit registrations of transfer and exchanges, the Trustee shall authenticate Debentures at the Registrar's request. No service charge shall be made for any registration of transfer or exchange of Debentures, but the Corporation may require payment of a sum sufficient to cover any tax or other governmental charge that may be imposed in relation thereto, other than exchanges pursuant to Sections 2.10, 3.07, 4.02, 10.05 or 11.02.

Section 2.07. Replacement Debentures.

If the Holder of a Debenture claims that the Debenture has been lost, destroyed or wrongfully taken, the Corporation shall issue and the Trustee shall authenticate a replacement Debenture if the Trustee's requirements are met. If required by the Trustee or the Corporation, an indemnity bond must be obtained and be sufficient in the judgment of both to protect the Corporation, the Trustee, any Agent or any authenticating agent from any loss which any of them may suffer if a Debenture is replaced. The Corporation may charge for its expenses in replacing a Debenture.

Every replacement Debenture is an additional obligation of the Corporation.

Section 2.08. Outstanding Debentures.

The Debentures outstanding at any time are all the Debentures authenticated by the Trustee except for those cancelled by it, those delivered to it for cancellation, and those described in this Section as not outstanding.

If a Debenture is replaced pursuant to Section 2.07, it ceases to be outstanding unless the Trustee receives proof satisfactory to it that the replaced Debenture is held by a bona fide purchaser.

If Debentures are considered paid under Section 5.01, they cease to be outstanding and interest on them ceases to accrue.

A Debenture does not cease to be outstanding because the Corporation or an Affiliate holds the Debenture.

Section 2.09. Treasury Debentures.

In determining whether the Holders of the required principal amount of Debentures have concurred in any direction, waiver or consent, Debentures owned by the Corporation or an

Affiliate shall be disregarded, except for purposes of determining whether the Trustee shall be protected in relying on any such direction, waiver or consent. Only Debentures which the Trustee knows are so owned shall be disregarded.

Section 2.10. Temporary Debentures.

Until definitive Debentures are ready for delivery, the Corporation may prepare and the Trustee shall authenticate temporary Debentures. Temporary Debentures shall be substantially in the form of definitive Debentures but may have variations that the Corporation considers appropriate for temporary Debentures. Without unreasonable delay, the Corporation shall prepare and the Trustee shall authenticate definitive Debentures in exchange for temporary Debentures.

Section 2.11. Cancellation.

The Corporation at any time may deliver Debentures to the Trustee for cancellation. The Registrar, the Paying Agent and the Conversion Agent shall forward to the Trustee any Debentures surrendered to them for registration of transfer, exchange, payment or conversion. The Trustee shall cancel all Debentures surrendered for registration of transfer, exchange, payment, conversion or cancellation and shall dispose of cancelled Debentures as the Corporation directs. The Corporation may not issue new Debentures to replace Debentures that it has paid or delivered to the Trustee for cancellation or that any Debentureholder has converted pursuant to Article 11.

Section 2.12. Defaulted Interest.

Any interest on any Debenture which is payable, but is not punctually paid, on any interest payment date (herein called "Defaulted Interest") shall forthwith cease to be payable to the Debentureholder on the relevant record date solely by virtue of such Debentureholder having been a Debentureholder; and such Defaulted Interest may be paid by the Corporation, at its election in each case, as provided in subsection (a) or (b) below:

(a) The Corporation may elect to make payment of any Defaulted Interest on the Debentures to the persons in whose names such Debentures (or their respective predecessor Debentures) are registered at the close of business on a special record date for the payment of such Defaulted Interest, which shall be fixed in the following manner. The Corporation shall notify the Trustee in writing of the amount of Defaulted Interest proposed to be paid on each Debenture and the date of the proposed payment (which date shall be such as will enable the Corporation to comply with the next sentence hereof), and at the same time the Corporation shall deposit with the Trustee an amount of money equal to the aggregate amount proposed to be

paid in respect of such Defaulted Interest or shall make arrangements satisfactory to the Trustee for such deposit prior to the date of the proposed payment, such money when deposited to be held in trust for the benefit of the persons entitled to such Defaulted Interest as in this subsection provided. Thereupon the Corporation shall fix a special record date for the payment of such Defaulted Interest which shall not be more than 15 nor less than 10 days prior to the date of the proposed payment and not less than 10 days after the receipt by the Trustee of the notice of the proposed payment. The Corporation, at its expense, shall cause notice of the proposed payment of such Defaulted Interest and the special record date therefor to be mailed, first-class postage prepaid, to each Holder of a Debenture at his address as it appears in the Debenture register not less than 10 days prior to such special record date. Notice of the proposed payment of such Defaulted Interest and the special record date therefore having been mailed as aforesaid, such Defaulted Interest shall be paid to the persons in whose names the Debentures (or their respective predecessor Debentures) are registered on such special record date and shall no longer be payable pursuant to the following subsection (b).

(b) The Corporation may make payment of any Defaulted Interest on the Debentures in any other lawful manner not inconsistent with the requirements of any securities exchange on which such Debentures may be listed and upon such notice as may be required by such exchange if, after notice given by the Corporation to the Trustee of the proposed payment pursuant to this subsection, such payment shall be deemed practicable by the Trustee.

Subject to the foregoing provisions of this Section, each Debenture delivered under this Indenture upon transfer of or in exchange for or in lieu of any other Debenture shall carry all the rights to interest accrued and unpaid, and to accrue, which were carried by such other Debenture and each such Debenture shall bear interest from such date that neither gain nor loss in interest shall result from such transfer, exchange or substitution.

ARTICLE 3 REDEMPTION OF DEBENTURES AT CORPORATION'S OPTION

Section 3.01. Redemption Right at Corporation's Option.

The Corporation has the right to redeem the Debentures at its sole option, in whole or in part, at any time and from time to time on or after March 1, 1988, at the following Redemption Prices (expressed in percentages of principal amount of the Debentures), plus unpaid accrued interest to the Redemption Date, subject to the terms and conditions set forth in this Article 3.

If redeemed during the 12-month period beginning
 March 1:

<u>Year</u>	<u>Percentage</u>	<u>Year</u>	<u>Percentage</u>
1988	106.0	1995	102.5
1989	105.5	1996	102.0
1990	105.0	1997	101.5
1991	104.5	1998	101.0
1992	104.0	1999	100.5
1993	103.5	2000 until	100.0
1994	103.0	stated maturity	

The election of the Corporation to redeem any Debenture shall be evidenced by a Board Resolution.

Section 3.02. Notices to Trustee.

If the Corporation wishes to redeem Debentures pursuant to this Article, it shall notify the Trustee of the Redemption Date and the principal amount of Debentures to be redeemed. The Corporation shall give the notice provided for in this Section not less than 45 days prior to the Redemption Date.

Section 3.03. Selection of Debentures to be Redeemed.

If less than all the Debentures are to be redeemed, the Trustee shall select the Debentures to be redeemed by lot. The Trustee shall make the selection not more than 60 days before the Redemption Date from Debentures then outstanding that have not been previously called for redemption. The Trustee may select for redemption portions of the principal of Debentures that have denominations larger than \$1,000. Debentures and portions of Debentures that the Trustee selects shall be in amounts of \$1,000 or integral multiples of \$1,000. Provisions of this Indenture that apply to Debentures called for redemption also apply to portions of Debentures called for redemption.

Section 3.04. Notice of Redemption.

At least 30 days but not more than 60 days before a Redemption Date, the Corporation shall mail notice of redemption to each Holder whose Debentures are to be redeemed.

The notice shall state:

- (1) the Redemption Date;
- (2) the Redemption Price;
- (3) the Conversion Price;

- (4) the name and address of the Paying Agent and Conversion Agent;
- (5) that Debentures called for redemption may be converted at any time prior to the close of business on the Redemption Date;
- (6) that Holders who wish to convert must satisfy the requirements of Section 11.02 hereof;
- (7) that Debentures called for redemption must be surrendered to the Paying Agent to collect the Redemption Price;
- (8) that interest on Debentures called for redemption ceases to accrue on and after the Redemption Date (unless the Corporation shall default in the payment of the Redemption Price); and
- (9) if less than all of the Debentures outstanding are to be redeemed, the identification (and, in the case of partial redemption, the respective principal amounts) of the Debentures to be redeemed.

At the Corporation's request, the Trustee shall give notice of redemption in the Corporation's name and at its expense.

Section 3.05. Effect of Notice of Redemption.

Once notice of redemption is mailed, Debentures called for redemption become due and payable on the Redemption Date at the Redemption Price.

Section 3.06. Deposit of Redemption Price.

On or before the Redemption Date, the Corporation shall deposit with the Paying Agent cash sufficient to pay the Redemption Price and accrued interest on all Debentures to be redeemed. The Paying Agent shall return to the Corporation any money not required due to the conversion of Debentures called for redemption.

Section 3.07. Debentures Redeemed in Part.

Upon surrender of a Debenture that is redeemed in part, the Trustee shall authenticate for the Holder a new Debenture equal in principal amount to the unredeemed portion of the Debenture surrendered.

Section 3.08. Conversion Arrangements on Call for Redemption.

Notwithstanding anything to the contrary contained in this Indenture, in connection with any redemption of Debentures pursuant to this Article 3, the Corporation, by an agreement with one or more investment bankers or other purchasers, may arrange for such purchasers to purchase all Debentures called for redemption (the "Called Debentures") which are either (i) surrendered for redemption or (ii) not duly surrendered for redemption or conversion prior to the close of business on the Redemption Date, and to convert the same into shares of Common Stock, by the purchasers' depositing with the Trustee (acting as Paying Agent with respect to the deposit of such amount and as Conversion Agent with respect to the conversion of such Called Debentures), in trust for the Holders of the Called Debentures, on or prior to the Redemption Date in the manner agreed to by the Corporation and such purchasers, an amount sufficient to pay the Redemption Price, payable by the Corporation on redemption of such Called Debentures. In connection with any such arrangement for purchase and conversion, the Trustee as Paying Agent shall pay on or after the Redemption Date such amounts so deposited by the purchasers in exchange for Called Debentures surrendered for redemption prior to the close of business on the Redemption Date and for all Called Debentures surrendered after such Redemption Date. Notwithstanding anything to the contrary contained in this Article 3, the obligation of the Corporation to pay the Redemption Price of such Called Debentures shall be satisfied and discharged to the extent such amount is so paid by such purchasers, provided, however, that nothing in this Section 3.08 shall in any way relieve the Corporation of the obligation to pay such Redemption Price on all Called Debentures to the extent such amount is not so paid by said purchasers. For all purposes of this Indenture, any Called Debentures surrendered by the Holders for redemption, and any Called Debentures not duly surrendered for redemption or conversion prior to the close of business on the Redemption Date, shall be deemed acquired by such purchasers from such Holders and surrendered by such purchasers for conversion and shall in all respects be deemed to have been converted, all as of immediately prior to the close of business on the Redemption Date, subject to the deposit by the purchasers of the above amount as aforesaid. Nothing in this Section 3.08 shall in any way limit the right of any Holder of a Debenture to convert such Debenture pursuant to the terms of this Indenture any time prior to the close of business on the Redemption Date.

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ARTICLE 4 REDEMPTION OF DEBENTURES UPON DEATH OF
THE DEBENTUREHOLDER OR BENEFICIAL OWNER

Section 4.01. Redemption Right.

The Corporation will redeem a Debenture, or a portion of a Debenture (in the principal amount of \$1,000 or integral multiples thereof) within 60 days following receipt by the Trustee of a request in accordance with Section 4.02 therefor from a Qualified Institution holding such Debenture for a deceased beneficial owner or from a deceased Debentureholder's personal representative, or surviving joint tenant, tenant by the entirety or tenant in common, subject to the limitations that the Corporation will not be obligated to redeem during any twelve-month period ending on any March 1: (i) the portion of a Debenture or Debentures presented on behalf of a deceased beneficial owner or deceased Debentureholder exceeding an aggregate principal amount of \$25,000 or (ii) Debentures presented on behalf of all deceased beneficial owners and deceased Debentureholders exceeding \$600,000 in aggregate principal amount. If the Corporation, although not obligated to do so, chooses to redeem Debentures of any deceased beneficial owner or deceased Debentureholder in any such twelve-month period in excess of the \$25,000 limitation, such redemption, to the extent that it exceeds the \$25,000 limitation for any deceased beneficial owner or deceased Debentureholder, shall not be included in the computation of the \$600,000 limitation for such period or any succeeding period.

Section 4.02. Redemption Procedure.

Debentures will be redeemed in the order of their receipt by the Trustee, except as hereinafter provided. Debentures not redeemed in any such twelve-month period because of the \$25,000 or \$600,000 limitations will be held for redemption during the following twelve-month period(s) until redeemed unless sooner withdrawn by the person presenting the Debenture for redemption.

Debentures may be presented on behalf of a deceased beneficial owner or a deceased Debentureholder for redemption by delivering to the Trustee: (1) a written request for redemption signed by an authorized officer of a Qualified Institution or by the deceased Debentureholder's personal representative or surviving joint tenant, tenant by the entirety, or tenant in common, (2) the Debenture(s) to be redeemed and (3) appropriate evidence of death of the Debentureholder and appropriate evidence of authority in the case of a request by a personal representative. No particular forms of request for redemption or evidence of death or authority to request redemption are required but each must be in a form satisfactory to the Trustee. The price to be paid by the Corporation for all Debentures presented to it pursuant to the

provisions described in this Section is 100% of the principal amount thereof plus unpaid accrued interest to the date of payment. Any acquisition of Debentures by the Corporation or its Subsidiaries other than by redemption upon the death of a Debentureholder pursuant to this Section shall not be included in the computation of either the \$25,000 or \$600,000 limitations for any period.

For purposes of this Section 4.02, a Debenture held in joint tenancy, tenancy by the entirety, or tenancy in common will be deemed to be held by a single Debentureholder and the death of any joint tenant, tenant by the entirety or tenant in common will be deemed the death of a Debentureholder. The death of a person, who, during his lifetime, was entitled to substantially all of the beneficial ownership interest of a Debenture will be deemed the death of the Debentureholder, regardless of the registered Debentureholder, if such beneficial interest can be established to the satisfaction of the Trustee. Such beneficial interest shall be deemed to exist in typical cases of street name or nominee ownership, ownership under the Uniform Gifts to Minors Act, community property or other joint ownership arrangements between a husband and wife (including individual retirement account or Keogh [H.R. 10] plans maintained solely by or for the decedent, or by or for the decedent and his spouse), and trust and certain other arrangements where one person has substantially all of the beneficial ownership interest in the Debenture during his lifetime. Beneficial interest shall include the power to sell, transfer or otherwise dispose of a Debenture and the right to receive the proceeds therefrom, as well as interest and principal payable with respect thereto.

In the case of a Debenture presented for redemption by a Qualified Institution on behalf of a deceased beneficial owner, the \$25,000 limitation shall apply to each such beneficial owner and the death of such beneficial owner shall entitle a Qualified Institution to seek redemption of such Debentures as if the deceased beneficial owner were the registered Debentureholder. A Qualified Institution, in its request for redemption on behalf of a deceased beneficial owner, must submit evidence, satisfactory to the Trustee, that it holds the Debenture on behalf of such beneficial owner and must certify that the aggregate requests for redemption tendered by such Qualified Institution on behalf of each such beneficial owner in any such twelve-month period does not exceed \$25,000. In addition, any request for redemption made by a Qualified Institution on behalf of a deceased beneficial owner must be delivered to the Trustee by registered mail, return receipt requested.

In the case of any Debenture which is presented for redemption in part only, upon such partial redemption, the Corporation shall execute and the Trustee shall authenticate

and deliver to, or on the order of, the presenting person a new Debenture in the principal amount equal to the unredeemed portion of the principal of the Debenture so presented.

In the case of any Debenture or portion thereof which is presented for redemption pursuant to this Article 4 and which has not been redeemed at the time the Corporation gives notice of its election to redeem Debentures pursuant to Article 3, such Debenture or portion thereof shall first be subject to redemption pursuant to Article 3 and if any such Debenture is not redeemed pursuant to Article 3 it shall then be subject to redemption pursuant to Article 4.

Nothing herein shall prohibit the Corporation from redeeming, in acceptance of tenders made pursuant hereto, Debentures in excess of the principal amount that the Corporation is obligated to redeem, nor from purchasing any Debentures in the open market. However, the Corporation may not use any Debentures purchased in excess of its obligation to redeem or in the open market as a credit against its redemption obligation hereunder.

Section 4.03. Withdrawal.

Any Debentures presented for redemption upon the death of the Debentureholder or the beneficial owner thereof may be withdrawn by the person presenting the same upon delivery of a written request for such withdrawal given to the Trustee prior to the issuance of a check in payment thereof.

Section 4.04. Redemption Register.

The Trustee shall maintain at its corporate trust office a register (the "Redemption Register") in which it shall record, in order of receipt, all presentations for redemption received by the Trustee in accordance with Section 4.02. Unless withdrawn, all such requests shall remain in effect, during the period in which they are received and thereafter from period to period, until the Debentures which are the subject of such request have been redeemed.

ARTICLE 5 COVENANTS

Section 5.01. Payment of Debentures.

The Corporation shall pay the principal of and interest on the Debentures on the dates and in the manner provided herein. Principal and interest shall be considered paid on the date due if the Trustee or any Paying Agent holds on that date money sufficient to pay all principal and interest then due, provided that if the Debentures are to be redeemed, notice of such redemption has been duly given pursuant to this Indenture or provision therefor satisfactory to the Trustee has been made.

The Corporation shall pay interest on overdue principal at the rate borne by the Debentures; it shall pay interest on overdue installments of interest at the same rate to the extent lawful.

Section 5.02. Reporting.

The Corporation shall file with the Trustee within 15 days after it files them with the SEC copies of the annual reports and of such information, documents, and other reports (or copies of such portions of any of the foregoing as the SEC may by rules and regulations prescribe) which the Corporation is required to file with the SEC pursuant to Section 13 or 15(d) of the Exchange Act. The Corporation also shall comply with the other provisions of TIA §314(a). The Corporation shall furnish to the Holder of Debentures upon request of such Holder, annual financial statements and quarterly reports containing unaudited financial statements.

Section 5.03. Corporate Existence.

Subject to Article 6, the Corporation will do or cause to be done all things necessary to preserve and keep in full force and effect its corporate existence and the rights (charter and statutory) of the Corporation; provided, however, that the Corporation shall not be required to preserve any such right, if the Board of Directors shall determine that the preservation thereof is no longer desirable in the conduct of the business of the Corporation and its Subsidiaries taken as a whole and that the loss thereof is not, and will not be, adverse in any material respect to the Holders.

Section 5.04. Compliance Certificate.

The Corporation shall deliver to the Trustee within 120 days after the end of each fiscal year of the Corporation an Officers' Certificate stating whether or not the signers know of any Default that occurred during the fiscal year. If they do, the certificate shall describe the Default and its status. The certificate need not comply with Section 12.05.

ARTICLE 6 SUCCESSORS

Section 6.01 When Corporation May Merge, etc.

The Corporation shall not consolidate or merge into, or transfer or lease all or substantially all of its assets to any person unless:

- (1) the person is a corporation organized and existing under the laws of the United States, or any State thereof or the District of Columbia;

- (2) the person assumes by supplemental indenture all the obligations of the Corporation under the Debentures and this Indenture, except that it need not assume the obligations of the Corporation as to conversion of the Debentures, if pursuant to Section 11.15, an Affiliate of the surviving, transferee or lessee corporation obligates itself by supplemental indenture to deliver securities, cash or other assets upon conversion of the Debentures;
- (3) immediately after the transaction no Default exists; and
- (4) the Corporation has delivered to the Trustee an Officers' Certificate and Opinion of Counsel, each stating that the transaction and supplemental indenture comply with this Article and Section 11.15.

The surviving, transferee or lessee corporation shall be the successor Corporation, but the predecessor Corporation in the case of a transfer or lease shall not be released from the obligation to pay the principal of and interest on the Debentures.

ARTICLE 7 DEFAULTS AND REMEDIES

Section 7.01. Events of Default.

An "Event of Default" occurs if:

- (1) the Corporation defaults in the payment of interest on any Debenture when the same becomes due and payable and the Default continues for a period of 30 days;
- (2) the Corporation defaults in the payment of the principal of any Debenture when the same becomes due and payable at maturity, upon redemption or otherwise;
- (3) the Corporation fails to comply with any of its other agreements in the Debenture or this Indenture and the Default continues for the period and after the notice specified below;
- (4) the Corporation defaults in the payment of any indebtedness having an outstanding principal balance of \$10,000,000 or more, whether such indebtedness now exists or shall hereafter be created, and any period of grace with respect thereto shall have expired, which default shall

result in such indebtedness being declared due and payable prior to the date on which it would otherwise become due and payable, and such default in payment is not cured, or such acceleration shall not be rescinded, annulled or obviated through payment, within thirty days after written notice to the Corporation from the Trustee or to the Corporation and to the Trustee from the Holders of not less than 25% in principal amount of the Debentures then outstanding under the Indenture, provided that no default shall occur hereunder if there shall have been delivered to the Trustee an Officers' Certificate stating that the Corporation is contesting in good faith the existence of such default in payment or event of default;

- (5) the Corporation pursuant to or within the meaning of any Bankruptcy Law:
 - (A) commences a voluntary case,
 - (B) consents to the entry of an order for relief against it in an involuntary case,
 - (C) consents to the appointment of a Custodian of it or for all or substantially all of its property, or
 - (D) makes a general assignment for the benefit of its creditors; or
- (6) a court of competent jurisdiction enters an order or decree under any Bankruptcy Law, and the order or decree remains unstayed and in effect for 60 days, that:
 - (A) is for relief against the Corporation in an involuntary case,
 - (B) appoints a Custodian of the Corporation or for all or substantially all of its property, or
 - (C) orders the liquidation of the Corporation.

The term "Bankruptcy Law" means title 11, U.S. Code, or any similar Federal or State law for the relief of debtors. The term "Custodian" means any receiver, trustee, assignee, liquidator or similar official under any Bankruptcy Law.

A Default under clause (3) is not an Event of Default until the Trustee or the Holders of at least 25% in principal

amount of the Debentures then outstanding notify the Corporation of the Default and the Corporation does not cure the Default within 90 days after receipt of the notice. The notice must specify the Default, demand that it be remedied and state that the notice is a "Notice of Default." The Trustee shall, if requested to do so by the Holders of 25% in principal amount of the Debentures, notify the Corporation of the Default pursuant to this Section.

Subject to the provisions of Sections 8.01 and 8.02, the Trustee shall not be charged with knowledge of any Event of Default unless written notice thereof shall have been given to a Trust Officer of the Trustee at the Corporate Trust Office by the Corporation, the Paying Agent, the Holder of a Debenture or an agent of such Holder.

Section 7.02. Acceleration.

If an Event of Default occurs, and is continuing, the Trustee, by notice to the Corporation, or the Holders of at least 25% in principal amount of the Debentures then outstanding, by notice to the Corporation and the Trustee, may declare the principal of, and accrued interest on, all the Debentures to be due and payable. Upon such declaration the principal and interest shall be due and payable immediately.

The Holders of a majority in principal amount of the Debentures then outstanding, by notice to the Trustee, may rescind an acceleration of all the Debentures and its consequences if (i) all existing Events of Default have been cured or waived except nonpayment of the principal and interest that has become due solely because of the acceleration and (ii) if the rescission would not conflict with any judgment or decree of a court of competent jurisdiction. No such rescission shall affect any subsequent Default or impair any right consequent thereon.

Section 7.03. Other Remedies.

If an Event of Default occurs and is continuing, the Trustee may pursue any available remedy to collect the payment of principal or interest on the Debentures or to enforce the performance of any provision of the Debenture or this Indenture.

The Trustee may maintain a proceeding even if it does not possess any of the Debentures or does not produce any of them in the proceeding. A delay or omission by the Trustee or any Debentureholder in exercising any right or remedy accruing upon an Event of Default shall not impair the right or remedy or constitute a waiver of or acquiescence in such Event of Default. All remedies are cumulative to the extent permitted by law.

Section 7.04. Waiver of Past Defaults.

The Holders of a majority in principal amount of the Debentures, by notice to the Trustee, may waive an existing Default and its consequences, except a Default in the payment of the principal of or interest on any Debenture or a Default under Article 11 hereof, an uncured failure to make any redemption payment or an uncured default with respect to a provision which cannot be modified under the terms of this Indenture without the consent of each Holder affected.

Section 7.05. Control by Majority.

The Holders of a majority in principal amount of the Debentures then outstanding may direct the time, method and place of conducting any proceeding for any remedy available to the Trustee or exercising any trust or power conferred on it. However, the Trustee may refuse to follow any direction that conflicts with law or this Indenture, is unduly prejudicial to the rights of other Debentureholders, or would involve the Trustee in personal liability; provided, that the Trustee may take any other action deemed proper by the Trustee which is not inconsistent with such direction.

Section 7.06. Limitation on Suits.

A Debentureholder may pursue a remedy with respect to this Indenture or the Debenture only if:

- (1) the Holder gives to the Trustee notice of a continuing Event of Default;
- (2) the Holders of at least 25% in principal amount of the Debentures then outstanding make a written request to the Trustee to pursue the remedy;
- (3) such Holder or Holders offer to the Trustee indemnity satisfactory to the Trustee against any loss, liability or expense;
- (4) the Trustee does not comply with the request within 60 days after receipt of the request and the offer of indemnity; and
- (5) during such 60-day period the Holders of a majority in principal amount of the Debentures then outstanding do not give the Trustee a direction inconsistent with the request.

A Debentureholder may not use this Indenture to prejudice the rights of another Debentureholder or to obtain a preference or priority over another Debentureholder.

Section 7.07. Rights of Holders to Receive Payment.

Notwithstanding any other provision of this Indenture, the right of any Holder of a Debenture to receive payment of principal and interest on the Debenture, on or after the respective due dates expressed in the Debenture, or to bring suit for the enforcement of any such payment on or after such respective dates, is absolute and unconditional and shall not be impaired or affected without the consent of the Holder.

Notwithstanding any other provision of this Indenture, the right of any Holder of a Debenture to bring suit for the enforcement of the right to convert the Debenture shall not be impaired or affected without the consent of the Holder.

Section 7.08. Collection Suit by Trustee.

If an Event of Default in payment of interest or principal specified in Section 7.01(1) or (2) occurs and is continuing, the Trustee may recover judgment in its own name and as trustee of an express trust against the Corporation for the whole amount of unpaid principal and accrued interest remaining unpaid. The Trustee may file such action to recover judgment based upon an Event of Default in the payment of interest or principal in a court of competent jurisdiction located in the State of Missouri. The Corporation hereby consents to subject itself to the jurisdiction of such courts located in the State of Missouri and hereby agrees to enter an appearance in such proceeding, provided the Trustee shall notify the Corporation of the commencement of such proceeding as herein provided generally with respect to the giving of notices.

Section 7.09. Trustee May File Proofs of Claim.

The Trustee may file such proofs of claim and other papers or documents as may be necessary or advisable in order to have the claims of the Trustee (including any claim for the reasonable compensation, expenses, disbursements and advances of the Trustee, its agents and counsel) and the Debentureholders allowed in any judicial proceedings relative to the Corporation, its creditors or its property, and shall be entitled and empowered to collect and receive any monies or other property payable or deliverable on any such claims and to distribute the same, and any Custodian in any such judicial proceeding is hereby authorized by each Debentureholder to make such payments to the Trustee, and in the event that the Trustee shall consent to the making of such payments directly to the Debentureholders, to pay to the Trustee any amount due to it for the reasonable compensation, expenses and disbursements and advances of the Trustee, its agents and counsel, and any other amounts due the Trustee under Section 8.07.

Section 7.10. Priorities.

If the Trustee collects any money pursuant to this Article, it shall pay out the money in the following order:

First: to the Trustee for amounts due under Section 8.07;

Second: to Debentureholders for amounts due and unpaid on the Debentures for principal and interest, ratably, without preference or priority of any kind, according to the amounts due and payable on the Debentures for principal and interest, respectively; and

Third: to the Corporation.

The Trustee may fix a record date and payment date for any payment to Debentureholders pursuant to this Article.

Section 7.11. Undertaking for Costs.

In any suit for the enforcement of any right or remedy under this Indenture or in any suit against the Trustee for any action taken or omitted by it as Trustee, a court in its discretion may require the filing by any party litigant in the suit of an undertaking to pay the costs of the suit, and the court in its discretion may assess reasonable costs, including reasonable attorneys' fees, against any party litigant in the suit, having due regard to the merits and good faith of the claims or defenses made by the party litigant. This Section does not apply to a suit by the Trustee, a suit by a Holder pursuant to Section 7.07 or a suit by Holders of more than 10% in principal amount of the Debentures.

Section 7.12. Waiver of Stay or Extension Laws.

The Corporation covenants (to the extent that it may lawfully do so) that it will not at any time insist upon, or plead, or in any manner whatsoever claim or take the benefit or advantage of, any stay or extension law wherever enacted, now or at any time hereafter in force, which may affect the covenants or the performance of the Indenture; and the Corporation (to the extent that it may lawfully do so) hereby expressly waives all benefit or advantage of any such law, and covenants that it will not hinder, delay or impede the execution of any power herein granted to the Trustee, but will suffer and permit the execution of every such power as though no such law had been enacted.

Section 7.13. Restoration of Rights and Remedies.

If the Trustee or any Holder has instituted any proceeding to enforce any right or remedy under the Indenture

and such proceeding has been discontinued or abandoned for any reason, or has been determined adversely to the Trustee or to such Holder, then and in every such case the Corporation, the Trustee and the Holders shall, subject to any determination in such proceeding, be restored severally and respectively to their former positions hereunder, and thereafter all rights and remedies of the Trustee and the Holders shall continue as though no such proceeding had been instituted.

ARTICLE 8 TRUSTEE

Section 8.01. Duties of Trustee.

- (a) If an Event of Default has occurred and is continuing, the Trustee shall exercise such of the rights and powers vested in it by this Indenture, and use the same degree of care and skill in their exercise as a prudent man would exercise or use under the circumstances in the conduct of his own affairs.
- (b) Except during the continuance of an Event of Default:
 - (1) The Trustee need perform only those duties that are specifically set forth in this Indenture and no others.
 - (2) In the absence of bad faith on its part, the Trustee may conclusively rely, as to the truth of the statements and the correctness of the opinions expressed therein, upon certificates or opinions furnished to the Trustee and conforming to the requirements of this Indenture. However, the Trustee shall examine the certificates and opinions to determine whether or not they conform to the requirements of this Indenture.
- (c) The Trustee may not be relieved from liability for its own negligent action, its own negligent failure to act or its own willful misconduct, except that:
 - (1) This paragraph does not limit the effect of paragraph (b) of this Section;
 - (2) The Trustee shall not be liable for any error of judgment made in good faith by a Trust Officer, unless it is proved

that the Trustee was negligent in ascertaining the pertinent facts; and

- (3) The Trustee shall not be liable with respect to any action it takes or omits to take in good faith in accordance with a direction received by it pursuant to Section 7.05.
- (d) Every provision of this Indenture that in any way relates to the Trustee is subject to paragraphs (a), (b) and (c) of this Section.
- (e) The Trustee may refuse to perform any duty or exercise any right or power unless it receives indemnity satisfactory to it against any loss, liability or expense.
- (f) The Trustee shall not be liable for interest on any money received by it except as otherwise agreed with the Corporation. Money held in trust by the Trustee need not be segregated from other funds except to the extent required by law.

Section 8.02. Rights of Trustee.

Except as otherwise provided in Section 8.01:

- (a) The Trustee may rely on any document believed by it to be genuine and to have been signed or presented by the proper person. The Trustee need not investigate any fact or matter stated in the document.
- (b) Before the Trustee acts or refrains from acting, it may require an Officers' Certificate or an Opinion of Counsel. The Trustee shall not be liable for any action it takes or omits to take in good faith in reliance on an Officers' Certificate or Opinion of Counsel.
- (c) The Trustee may act through agents and shall not be responsible for the misconduct or negligence of any agent appointed with due care.
- (d) The Trustee shall not be liable for any action it takes or omits to take in good faith which it believes to be authorized or within its rights or powers.

Section 8.03. Individual Rights of Trustee.

The Trustee in its individual or any other capacity may become the owner or pledgee of Debentures and may otherwise deal with the Corporation or an Affiliate with the same rights it would have if it were not Trustee. Any Agent may do the same with like rights. However, the Trustee is subject to Sections 8.10 and 8.11.

Section 8.04. Trustee's Disclaimer.

The Trustee makes no representation as to the validity or adequacy of this Indenture or the Debenture, it shall not be accountable for the Corporation's use of the proceeds from the Debentures, and it shall not be responsible for any statement in the Debenture other than its authentication.

Section 8.05. Notice of Events of Defaults.

If an Event of Default occurs and is continuing and if it is known to the Trustee, the Trustee shall mail to Debentureholders a notice of the Event of Default within 90 days after it occurs. Except in the case of a Event of Default in payment on any Debenture, the Trustee may withhold the notice if and so long as a committee of its Trust Officers in good faith determines that withholding the notice is in the interests of Debentureholders.

Section 8.06. Reports by Trustee to Holders.

Within 60 days after each March 1 following the date of this Indenture, the Trustee shall mail to Debentureholders a brief report dated as of such reporting date that complies with TIA §313(a). The Trustee also shall comply with TIA §313(b)(2).

A copy of each report at the time of its mailing to Debentureholders shall be filed with the SEC and each stock exchange on which the Debentures are listed. The Corporation shall notify the Trustee when the Debentures are listed on any stock exchange.

Section 8.07. Compensation and Indemnity.

The Corporation shall pay to the Trustee from time to time reasonable compensation for its services. The Trustee's compensation shall not be limited by any law on compensation of a trustee of an express trust. The Corporation shall reimburse the Trustee upon request for all reasonable out-of-pocket expenses incurred by it. Such expenses shall include the reasonable compensation and out-of-pocket expenses of the Trustee's agents and counsel.

The Corporation shall indemnify the Trustee against any loss or liability incurred by it. The Trustee shall notify the Corporation promptly of any claim for which it may seek indemnity. The Corporation shall defend the claim and the Trustee shall cooperate in the defense. The Trustee may have separate counsel and the Corporation shall pay the reasonable fees and expenses of such counsel. The Corporation need not pay for any settlement made without its consent which shall not be unreasonably withheld.

The Corporation need not reimburse any expense or indemnify against any loss or liability incurred by the Trustee through negligence or bad faith.

To secure the Corporation's payment obligations in this Section, the Trustee shall have a lien prior to the Debentures on all money or property held or collected by the Trustee, except that held in trust to pay principal and interest on particular Debentures.

When the Trustee incurs expenses or renders services after an Event of Default specified in Section 7.01(4) or (5) occurs, the expenses and the compensation for the services are intended to constitute expenses of administration under any Bankruptcy Law.

Section 8.08. Replacement of Trustee.

A resignation or removal of the Trustee and appointment of a successor Trustee shall become effective only upon the successor Trustee's acceptance of appointment as provided in this Section.

The Trustee may resign by so notifying the Corporation. The Holders of a majority in principal amount of the Debentures may remove the Trustee by so notifying the Trustee and the Corporation. The Corporation may remove the Trustee if:

- (1) the Trustee fails to comply with Section 8.10;
- (2) the Trustee is adjudged a bankrupt or an insolvent;
- (3) a receiver or public officer takes charge of the Trustee or its property; or
- (4) the Trustee become incapable of acting.

If the Trustee resigns or is removed or if a vacancy exists in the office of Trustee for any reason, the Corporation shall promptly appoint a successor Trustee. Within one year after the successor Trustee assumes office, the Holders of a majority in principal amount of the Debentures may appoint a

successor Trustee to replace the successor Trustee appointed by the Corporation.

If a successor Trustee does not take office within 60 days after the retiring Trustee resigns or is removed, the retiring Trustee, the Corporation or the Holders of at least 10% in principal amount of the Debentures then outstanding may petition any court of competent jurisdiction for the appointment of a successor Trustee.

If the Trustee fails to comply with Section 8.10, any Debentureholder may petition any court of competent jurisdiction for the removal of the Trustee and the appointment of a successor Trustee.

A successor Trustee shall deliver a written acceptance of its appointment to the retiring Trustee and to the Corporation. Thereupon the resignation or removal of the retiring Trustee shall become effective, and the successor Trustee shall have all the rights, powers and duties of the Trustee under this Indenture. The successor Trustee shall mail a notice of its succession to Debentureholders. The retiring Trustee shall promptly transfer all property held by it as Trustee to the successor Trustee, subject to the lien provided for in Section 8.07.

Section 8.09. Successor Trustee by Merger, etc.

If the Trustee consolidates, merges or converts into, or transfers all or substantially all of its corporate trust business to, another corporation, the surviving or transferee corporation without any further act shall be the successor Trustee.

Section 8.10. Eligibility; Disqualification.

This Indenture shall always have a Trustee who satisfies the requirements of TIA §310(a)(1). The Trustee shall always have a combined capital and surplus of at least \$10,000,000 as set forth in its most recent published annual report of condition. The Trustee is subject to TIA §310(b), including the optional provision permitted by the second sentence of TIA §310(b)(9).

Section 8.11. Preferential Collection of Claims Against Corporation.

The Trustee is subject to TIA §311(a), excluding any creditor relationship listed in TIA §311(b). A Trustee who has resigned or been removed is subject to TIA §311(a) to the extent indicated.

Section 8.12. Appointment of Co-Trustee.

It is the purpose of this Indenture that there shall be no violation of any law of any jurisdiction denying or restricting the right of banking corporations or associations to transact business as trustee in such jurisdiction. It is recognized that in case of litigation under this Indenture, and in particular in case of the enforcement on an Event of Default, or in case the Trustee deems that by reason of any present or future law of any jurisdiction it may not exercise any of the powers, rights or remedies herein granted to the Trustee in trust, as herein granted, or take any other action which may be desirable or necessary in connection therewith, it may be necessary that the Trustee appoint an additional individual or institution as a separate or Co-Trustee.

The Trustee may appoint an additional individual or institution as a separate or Co-Trustee, in which event each and every remedy, power, right, claim, demand, cause of action, immunity, estate, title, interest and lien expressed or intended by this Indenture, to be exercised by or vested in or conveyed to the Trustee with respect thereto shall be exercisable by and vest in such separate or Co-Trustee but only to the extent necessary to enable such separate or Co-Trustee to exercise such powers, rights and remedies, and every covenant and obligation necessary to the exercise thereof by such separate or Co-Trustee shall run to and be enforceable by either of them.

Should any deed, conveyance or instrument in writing from the Corporation be required by the separate or Co-Trustee so appointed by the Trustee for more fully and certainly vesting in and confirming to it such properties, rights, powers, trusts, duties and obligations, including particularly the right to be paid its fees and expenses for services rendered, any and all such deeds, conveyances and instruments in writing shall, on request, be executed, acknowledged and delivered by the Corporation. In case any separate or Co-Trustee, or a successor to either, shall die, become incapable of acting, resign or be removed, all the estates, properties, rights, powers, trusts, duties and obligations of such separate or Co-Trustee, so far as permitted by law, shall vest in and be exercised by the Trustee until the appointment of a new Trustee or successor to such separate or Co-Trustee.

ARTICLE 9 DISCHARGE OF INDENTURE

Section 9.01. Termination of Corporation's Obligations.

The Corporation may at any time terminate all of its obligations under this Indenture if:

- (1) the Corporation irrevocably deposits in trust with the Trustee money or U. S. Government Obligations sufficient to pay principal and interest on the Debentures at maturity or on redemption, as the case may be; and
- (2) if such deposit shall be sufficient to pay principal, premium, if any, and interest on the Debentures only to a specified redemption date, the Corporation shall have given to the Trustee irrevocable instructions to call the Debentures for redemption on such date.

However, the Corporation's obligations in Sections 2.03, 2.04, 2.05, 2.06, 2.07, 5.01, 8.07, 8.08 and 9.03 and in Article 11, shall survive until the Debentures are no longer outstanding. Thereafter, the Corporation's obligations in Sections 8.07 and 9.03 shall survive.

After a deposit, the Trustee upon request shall acknowledge in writing the discharge of the Corporation's obligations under this Indenture except for those surviving obligations specified above.

In order to have money available on a payment date to pay principal or interest on the Debentures, the U. S. Government Obligations shall be payable as to principal or interest on or before such payment date in such amounts as will provide the necessary money. The U. S. Government Obligations shall not be callable at the issuer's option.

"U. S. Government Obligations" means direct obligations of the United States or those obligations for the payment of which the full faith and credit of the United States is pledged.

Section 9.02. Application of Trust Money.

The Trustee shall hold in trust money or U. S. Government Obligations deposited with it pursuant to Section 9.01. It shall apply the deposited money and the money from the U. S. Government Obligations through the Paying Agent and in accordance with this Indenture to the payment of principal and interest on the Debentures.

Section 9.03. Repayment to Corporation.

The Trustee and the Paying Agent shall promptly pay to the Corporation upon request any excess money or securities held by them at any time. The obligation of the Trustee and the Paying Agent to pay such excess money or securities to the Corporation shall survive the payment, conversion and/or cancellation of all the Debentures until all such excess money and securities have been so paid.

The Trustee and the Paying Agent shall pay to the Corporation upon request any money held by them for the payment of principal or interest that remains unclaimed for two years. After payment to the Corporation, Debentureholders entitled to the money must look to the Corporation for payment as general creditors unless an applicable abandoned property law designates another person.

ARTICLE 10 AMENDMENTS, SUPPLEMENTS AND WAIVERS

Section 10.01. Without Consent of Holders.

The Corporation and the Trustee may amend or supplement this Indenture or the Debenture without the consent of any Debentureholder:

- (1) to cure any ambiguity, omission, defect or inconsistency;
- (2) to comply with Section 6.01 and Section 11.15;
- (3) to provide for uncertificated Debentures in addition to certificated Debentures; or
- (4) to make any change that does not adversely affect the rights of any Debentureholder.

Section 10.02. With Consent of Holders.

The Corporation and the Trustee may amend or supplement this Indenture or the Debentures with the written consent of the Holders of at least a majority in principal amount of the Debentures then outstanding. Without the consent of each Debentureholder affected, however, an amendment under this Section may not:

- (1) reduce the amount of Debentures whose Holders must consent to an amendment or waiver;
- (2) reduce the rate of or change the time for payment of interest on any Debenture;
- (3) reduce the principal of or change the maturity of any Debenture;
- (4) waive a Default in the payment of the principal of or interest on any Debenture;
- (5) make any Debenture payable in money other than that stated in the Debenture; or
- (6) modify the provisions of Sections 7.04, 7.07 and 10.02 (second sentence).

After an amendment or supplement under this Section becomes effective, the Corporation shall mail to Debenture-holders a notice briefly describing the amendment.

Section 10.03. Compliance with Trust Indenture Act.

Every amendment or supplement to this Indenture or the Debenture shall be set forth in a supplemental indenture that complies with the TIA as then in effect.

Section 10.04. Revocation and Effect of Consents.

Until an amendment, supplement or waiver becomes effective, a consent to it by a Holder of a Debenture is a continuing consent by the Holder and every subsequent Holder of a Debenture or portion of a Debenture that evidences the same debt as the consenting Holder's Debenture, even if notation of the consent is not made on any Debenture. However, any such Holder or subsequent Holder may revoke the consent as to his Debenture or portion of a Debenture if the Trustee receives the notice of revocation before the date the amendment, supplement or waiver becomes effective.

Section 10.05. Notation on or Exchange of Debentures.

The Trustee may place an appropriate notation about an amendment, supplement or waiver on any Debenture thereafter authenticated. The Corporation in exchange for all Debentures may issue and the Trustee shall authenticate new Debentures that reflect the amendment, supplement or waiver.

Section 10.06. Trustee Protected.

The Trustee need not sign any supplemental indenture that adversely affects its rights.

ARTICLE 11 CONVERSION

Section 11.01. Conversion Privilege; Conversion Price.

A Holder of a Debenture, at his sole option, may convert such Debenture into Common Stock at any time prior to the close of business on March 1, 2012. If a Debenture is called for redemption by the Corporation, the Holder thereof may convert such Debenture into Common Stock at any time prior to the close of business on the Redemption Date. The number of shares of Common Stock issuable upon conversion of a Debenture is determined by dividing the principal amount to be converted by the Conversion Price in effect on the Conversion Date.

The initial Conversion Price is \$29.85 per share. The Conversion Price is subject to adjustment as described in this Article 11.

A Holder may convert a portion of a Debenture if the portion to be converted is \$1,000 or an integral multiple thereof. Provisions in this Indenture which apply to the conversion of all of a Debenture also apply to a portion of such Debenture.

Section 11.02. Conversion Procedure.

To convert a Debenture, a Holder must:

- (i) complete and sign the conversion notice on the back of the Debenture;
- (ii) surrender the Debenture to the Conversion Agent;
- (iii) furnish appropriate endorsements and transfer documents if required by the Registrar or the Conversion Agent; and
- (iv) pay any transfer or similar tax required by Section 11.04.

The date on which the Holder satisfies all such requirements is the Conversion Date. As soon as practicable thereafter, the Corporation shall deliver through the Conversion Agent a certificate for the number of full shares of Common Stock issuable upon the conversion and a check for any fractional share. The person in whose name the certificate is registered shall be treated as a stockholder of record of the Corporation on and after the Conversion Date.

No payment or adjustment will be made for accrued interest on a converted Debenture.

If a Holder converts more than one Debenture at the same time, the number of full shares issuable upon the conversion shall be based on the total principal amount of the Debentures converted.

Upon surrender of a Debenture that is converted in part, the Trustee shall authenticate for the Holder a new Debenture equal in principal amount to the unconverted portion of the Debenture surrendered.

If the last day on which a Debenture may be converted is a Legal Holiday in a place where a Conversion Agent is located, the Debenture may be surrendered to that Conversion Agent on the next succeeding day that is not a Legal Holiday.

Section 11.03. Fractional Shares.

The Corporation will not issue a fractional share of Common Stock upon conversion of a Debenture. Instead the

Corporation will deliver its check for the current market value of the fractional share. The current market value of a fraction of a share is determined by multiplying the current market price of a full share by the fraction and rounding the result to the nearest cent.

The current market price of a share of Common Stock is the Quoted Price of the Common Stock on the last trading day prior to the Conversion Date. In the absence of such a quotation, the Corporation shall determine the current market price on the basis of such quotations as it considers appropriate.

Section 11.04. Taxes on Conversion.

If a Holder of a Debenture converts it, the Corporation shall pay any documentary, stamp or similar issue or transfer tax due on the issue of shares of Common Stock upon the conversion. However, the Holder shall pay any such tax which is due because the shares are issued in a name other than the Holder's name.

Section 11.05. Corporation to Provide Stock.

The Corporation shall at all times reserve and have available, free from preemptive rights out of its authorized but unissued Common Stock or its Common Stock held in treasury, enough shares of Common Stock to permit the conversion of the Debentures.

All shares of Common Stock which may be issued upon conversion of the Debentures shall be fully paid and nonassessable.

Before taking any action that would cause an adjustment reducing the Conversion Price below the then par value (if any) of the shares of Common Stock issuable upon conversion of the Debentures, the Corporation will take any corporate action which may, in the opinion of its counsel, be necessary in order that the Corporation may validly and legally issue fully paid and nonassessable shares of such Common Stock at such Conversion Price.

The Corporation will endeavor to comply with all securities laws regulating the offer and delivery of shares of Common Stock upon conversion of Debentures and will endeavor to list such shares on each national securities exchange, if any, on which its Common Stock is then listed.

Section 11.06. Adjustment for Change in Capital Stock.

If the Corporation:

- (1) pays a dividend or makes a distribution on its Common Stock in shares of its Common Stock;

- (2) subdivides its outstanding shares of Common Stock into a greater number of shares;
- (3) combines its outstanding shares of Common Stock into a smaller number of shares;
- (4) makes a distribution on its Common Stock in shares of its Capital Stock other than Common Stock; or
- (5) issues by reclassification of its Common Stock any shares of its Capital Stock,

then the conversion privilege and the Conversion Price in effect immediately prior to such action shall be adjusted so that the Holder of a Debenture thereafter converted may receive the number of shares of Capital Stock of the Corporation which he would have owned immediately following such action if he had converted the Debenture immediately prior to such action.

Subject to Section 11.10, the adjustment shall become effective immediately after the record date in the case of a dividend or distribution and immediately after the effective date in the case of a subdivision, combination or reclassification.

If, after an adjustment, a Holder of a Debenture, upon conversion of such Debenture may receive shares of two or more classes of Capital Stock of the Corporation, the Board of Directors shall determine the allocation of the adjusted Conversion Price between the classes of Capital Stock. After such allocation, the conversion privilege and the Conversion Price with respect to each class of Capital Stock shall thereafter be subject to adjustment on terms comparable to those with respect to Common Stock in this Article.

Section 11.07. Adjustment for Rights Issue.

If the Corporation distributes any rights or warrants to all holders of its Common Stock entitling them for a period expiring within 60 days after the record date mentioned below to purchase shares of Common Stock at a price per share less than the current market price per share on that record date, the Conversion Price shall be adjusted in accordance with the formula:

$$C' = C \times \frac{0 + \frac{(N \times P)}{M}}{0 + N}$$

where:

C' = the adjusted Conversion Price.

- C = the current Conversion Price.
- O = the number of shares of Common Stock outstanding on the record date.
- N = the number of additional shares of Common Stock offered.
- P = the offering price per share of the additional shares.
- M = the current market price per share of Common Stock on the record date.

Subject to Section 11.10, the adjustment shall become effective immediately after the record date for the determination of stockholders entitled to receive the rights or warrants.

Section 11.08. Adjustment for Other Distributions.

If the Corporation distributes to all holders of its Common Stock any of its assets or debt securities or any rights or warrants to purchase securities of the Corporation, the Conversion Price shall be adjusted in accordance with the formula:

$$C' = C \times \frac{M - F}{M}$$

where:

- C' = the adjusted Conversion Price.
- C = the current Conversion Price.
- M = the current market price per share of Common Stock on the record date mentioned below.
- F = the fair market value on the record date of the assets, securities, rights or warrants applicable to one share of Common Stock. The Corporation shall determine the fair market value.

Subject to Section 11.10, the adjustment shall become effective immediately after the record date for the determination of stockholders entitled to receive the distribution.

This Section does not apply to cash dividends or cash distributions paid out of consolidated current or retained earnings as shown on the books of the Corporation. Also, this Section does not apply to rights or warrants referred to in Section 11.07.

Section 11.09. Current Market Price.

In Sections 11.07 and 11.08, the current market price per share of Common Stock on any date is the average of the Quoted Prices of the Common Stock for 30 consecutive trading days commencing 45 trading days before the date in question. In the absence of one or more such quotations, the Board of Directors shall determine the current market price on the basis of such quotations as it considers appropriate.

Section 11.10. When Adjustment May Be Deferred.

No adjustment in the Conversion Price need be made pursuant to Section 11.06 unless the adjustment would require an increase or decrease of at least 1% in the Conversion Price. No adjustment in the Conversion Price need be made pursuant to Sections 11.07 or 11.08 unless the adjustment would require an increase or decrease of at least 5% in the Conversion Price. Any adjustments that are not made pursuant to Section 11.06 shall be carried forward and taken into account in the calculation of any subsequent adjustment pursuant to Section 11.06. Any adjustments that are not made pursuant to either Section 11.07 or 11.08 shall be carried forward and taken into account in the calculation of any subsequent adjustment pursuant to Section 11.07 or 11.08.

All calculations under this Article shall be made to the nearest cent or to the nearest 1/100th of a share, as the case may be.

Section 11.11. When No Adjustment Required.

No adjustment need be made for a transaction referred to in Section 11.06, 11.07 or 11.08 if Debentureholders are to participate in the transaction on a basis and with notice that the Board of Directors determines to be fair and appropriate in light of the basis and notice on which holders of Common Stock participate in the transaction.

No adjustment need be made for rights to purchase Common Stock pursuant to a Corporation plan for reinvestment of dividends or interest or pursuant to an employees' stock purchase or stock option plan.

No adjustment need be made for a change in the par value of the Common Stock or from par value Common Stock to no par value Common Stock.

To the extent the Debentures become convertible into cash, no adjustment need be made thereafter as to the cash. Interest will not accrue on the cash.

Section 11.12. Notice of Adjustment.

Whenever the Conversion Price is adjusted, the Corporation shall promptly mail to Debentureholders a notice of the adjustment. The Corporation shall file with the Trustee a certificate from the Corporation's independent public accountants briefly stating the facts requiring the adjustment and the manner of computing it. The certificate shall be conclusive evidence that the adjustment is correct.

Section 11.13. Voluntary Reduction.

The Corporation, at its option, from time to time may reduce the Conversion Price by any amount for any period of time if the period is at least 20 days and if the reduction is irrevocable during the period.

Whenever the Conversion Price is reduced, the Corporation shall mail to Debentureholders a notice of the reduction. The Corporation shall mail the notice at least 15 days before the date that the reduced Conversion Price takes effect. The notice shall state the reduced Conversion Price and the period it will be in effect.

A reduction of the Conversion Price does not change or adjust the Conversion Price otherwise in effect for purposes of Sections 11.06 through 11.08.

Section 11.14. Notice of Certain Transactions.

If:

- (1) the Corporation takes any action that would require an adjustment in the Conversion Price pursuant to Section 11.06, 11.07 or 11.08 and if the Corporation does not allow Debentureholders to participate pursuant to Section 11.11;
- (2) the Corporation takes any action that would require a supplemental indenture pursuant to Section 11.15; or
- (3) there is a liquidation or dissolution of the Corporation,

the Corporation shall cause to be filed with the Trustee and Conversion Agent and shall mail to Debentureholders a notice stating the proposed record date (or other applicable determination date) for a dividend or distribution or the proposed effective date of a subdivision, combination, reclassification, consolidation, merger, transfer, lease, liquidation or dissolution and the date as of which it is expected that holders of Common Stock of record shall be entitled to exchange

their shares of Common Stock for securities or other property deliverable in connection with such transaction. The Corporation shall mail the notice at least 20 days before such date. Failure to mail the notice or any defect in it shall not affect the validity of the transaction.

Section 11.15. Reorganization of Corporation.

If the Corporation is a party to a transaction subject to Section 6.01 or a merger which reclassifies or changes its outstanding Common Stock, the person obligated to deliver securities, cash or other assets upon conversion of Debentures shall enter into a supplemental indenture. If the issuer of securities deliverable upon conversion of Debentures is an Affiliate of the surviving, transferee or lessee corporation, that issuer shall join in the supplemental indenture.

The supplemental indenture shall provide that the Holder of a Debenture may convert it into the kind and amount of securities, cash or other assets which he would have owned immediately after the consolidation, merger, transfer or lease if he had converted the Debenture immediately before the effective date of the transaction. The supplemental indenture shall provide for adjustments which shall be as nearly equivalent as may be practical to the adjustments provided for in this Article. The surviving transferee or lessee Corporation shall mail to Debentureholders a notice briefly describing the supplemental indenture.

If this Section applies, Section 11.06 does not apply.

Section 11.16. Corporation Determination Final.

Any determination that the Corporation or the Board of Directors must make pursuant to Section 11.03, 11.06, 11.07, 11.08, 11.09 or 11.11 is conclusive.

Section 11.17. Trustee's Disclaimer.

The Trustee has no duty to determine when an adjustment under this Article should be made, how it should be made or what it should be. The Trustee has no duty to determine whether any provisions of a supplemental indenture under Section 11.15 are correct. The Trustee makes no representation as to the validity or value of any securities or assets issued upon conversion of Debentures. The Trustee shall not be responsible for the Corporation's failure to comply with this Article. Each Conversion Agent other than the Corporation shall have the same protection under this Section as the Trustee.

ARTICLE 12 MISCELLANEOUS

Section 12.01. Trust Indenture Act Controls.

If any provision of this Indenture limits, qualifies, or conflicts with another provision which is required to be included in this Indenture by the TIA, the required provision shall control.

Section 12.02. Notice.

Any notice or communication by the Corporation or the Trustee to the other is duly given if in writing and delivered in person or mailed by first-class mail addressed as follows:

if to the Corporation:

NORTHWEST NATURAL GAS COMPANY
One Pacific Square
220 N.W. Second Avenue
Portland, Oregon 97209
Attn: Secretary

if to the Trustee:

CENTERRE TRUST COMPANY OF ST. LOUIS
510 Locust Street
St. Louis, Missouri 63101
Attn: Corporate Trust Division

The Corporation or the Trustee by notice to the other may designate additional or different addresses for subsequent notices or communications.

Any notice or communication to a Debentureholder shall be mailed by first-class mail to his address shown on the register kept by the Registrar. Failure to mail a notice or communication to a Debentureholder or any defect in it shall not affect its sufficiency with respect to other Debentureholders.

If a notice or communication is mailed in the manner provided above within the time prescribed, it is duly given, whether or not the addressee receives it.

If the Corporation mails a notice or communication to Debentureholders, it shall mail a copy to the Trustee and each Agent at the same time.

All notices or communications shall be in writing except as set forth below.

In case by reason of the suspension of regular mail service, or by reason of any other cause, it shall be impossible to mail any notice required by this Indenture, then such method of notification as shall be made with the approval of the Trustee shall constitute a sufficient mailing of such notice.

Section 12.03. Communication by Holders with Other Holders.

Debentureholders may communicate pursuant to TIA §312(b) with other Debentureholders with respect to their rights under this Indenture or the Debenture. The Corporation, the Trustee, the Registrar and anyone else shall have the protection of TIA §312(c).

Section 12.04. Certificate and Opinion as to Conditions Precedent.

Upon any request or application by the Corporation to the Trustee to take any action under this Indenture, the Corporation shall furnish to the Trustee:

- (1) an Officers' Certificate stating that, in the opinion of the signers, all conditions precedent, if any, provided for in this Indenture relating to the proposed action have been complied with; and
- (2) an Opinion of Counsel stating that, in the opinion of such counsel, all such conditions precedent have been complied with.

Section 12.05. Statements Required in Certificate or Opinion.

Each Officers' Certificate or Opinion of Counsel with respect to compliance with a condition or covenant provided for in this Indenture shall include:

- (1) a statement that the person making such Officers' Certificate or Opinion of Counsel has read such covenant or condition;
- (2) a brief statement as to the nature and scope of the examination or investigation upon which the statements or opinions contained in such Officers' Certificate or Opinion of Counsel are based;
- (3) a statement that, in the opinion of such person, he has made such examination or investigation as is necessary to enable him to express an informed opinion as to whether or not such covenant or condition has been complied with; and

- (4) a statement as to whether or not, in the opinion of such person, such condition or covenant has been complied with.

Section 12.06. Rules by Trustee and Agents.

The Trustee may make reasonable rules for action by or a meeting of Debentureholders. The Registrar, Paying Agent or Conversion Agent may make reasonable rules and set reasonable requirements for its functions.

Section 12.07. Legal Holidays.

A "Legal Holiday" is a Saturday, a Sunday, or a day on which banking institutions in the relevant jurisdiction are not required to be open. If a payment date is a Legal Holiday at a place of payment, payment may be made at that place on the next succeeding day that is not a Legal Holiday, and no interest shall accrue for the intervening period.

Section 12.08. No Recourse Against Others.

No liability under the Debentures shall inure to any director, officer, employee or stockholders, as such, of the Corporation and each Debentureholder, by accepting the Debenture, waives and releases all such liability.

Section 12.09. Duplicate Originals.

The parties may sign any number of copies of this Indenture. One signed copy is enough to prove this Indenture.

Section 12.10. Governing Law.

The laws of the State of Oregon shall govern this Indenture and the Debenture.

Section 12.11. Table of Contents, Headings, etc.

The table of contents, cross-reference sheet and headings of the Articles and Sections of this Indenture have been inserted for convenience of reference only, are not to be

considered a part hereof, and shall in no way modify or restrict any of the terms or provisions hereof.

SIGNATURES

Dated: January 15, 1987

NORTHWEST NATURAL GAS COMPANY
("Corporation")

(SEAL)

By: Wesley E. Radford
Its Vice President & Treasurer

Attest: C. J. Rue
Its Secretary

Dated: January 15, 1987

CENTERRE TRUST COMPANY OF ST. LOUIS
("Trustee")

(SEAL)

By: J. Rector
Its Assistant Treasurer

Attest: H. Whelan
Its Assistant Secretary

EXHIBIT A
(Face of Debenture)

NORTHWEST NATURAL GAS COMPANY

7-1/4% Convertible Debenture due 2012

No. _____ \$ _____

NORTHWEST NATURAL GAS COMPANY, an Oregon corporation for value received, hereby promises to pay to _____, or registered assigns the principal sum of _____ DOLLARS on March 1, 2012, and to pay interest on said principal sum at the rate of 7-1/4% per annum calculated on the basis of a 360-day year of twelve 30-day months.

The interest so payable on any interest payment date will, subject to certain exceptions provided in the Indenture hereafter referred to, be paid to the person in whose name this Debenture is registered at the close of business (whether or not a business day) on the following respective record date, as the case may be, next preceding such interest payment date.

Interest Payment Dates: March 1 and September 1.

Record Dates: February 15 and August 15.

ADDITIONAL PROVISIONS OF THIS DEBENTURE ARE SET FORTH ON THE REVERSE HEREOF.

Dated:

NORTHWEST NATURAL GAS COMPANY

By: _____
Its President

(SEAL)

ATTEST:

By: _____
Its Secretary

TRUSTEE'S CERTIFICATE OF AUTHENTICATION

This Debenture is one of the Debentures provided for
in the within-mentioned Indenture.

CENTERRE TRUST COMPANY OF
ST. LOUIS, as Trustee

By: _____
Authorized Signature

(Back of Debenture)

NORTHWEST NATURAL GAS COMPANY
7-1/4% Convertible Debenture due 2012

1. Interest.

NORTHWEST NATURAL GAS COMPANY ("Corporation"), an Oregon corporation, promises to pay interest on the principal amount of this Debenture at the rate per annum shown above. The Corporation will pay interest semi-annually on March 1 and September 1, of each year, commencing September 1, 1987. Interest on this Debenture will accrue from the most recent date to which interest has been paid, or, if no interest has been paid previously, from the date of original issuance of this Debenture; provided that, if there is no existing default in the payment of interest, and if this Debenture is authenticated between a record date referred to on the face hereof and the next succeeding interest payment date, interest shall accrue from the next interest payment date.

2. Method of Payment.

The Corporation will pay interest on the Debentures (except defaulted interest) to the persons who are registered holders of Debentures at the close of business on the record date next preceding the interest payment date. The Corporation will pay interest to such holders on the next interest payment date even though Debentures are cancelled after the record date but on or before the interest payment date. Holders must surrender Debentures to a Paying Agent to collect principal payments. The Corporation will pay principal and interest in money of the United States that at the time of payment is legal tender for payment of public and private debts. However, the Corporation may pay principal and interest by check payable in such money. Payment of principal will be made at the offices of the Trustee. The Corporation may mail an interest check to a holder's registered address.

3. Paying Agent, Registrar, Conversion Agent.

Initially, Centerre Trust Company of St. Louis ("Trustee"), 510 Locust Street, St. Louis, Missouri, 63101, will act as Paying Agent, Registrar and Conversion Agent. The Corporation may change any Paying Agent, Registrar, Conversion Agent or Co-Registrar without notice. The Corporation or any of its Subsidiaries may act in any such capacity.

4. Indenture.

The Corporation issued the Debentures under an Indenture dated as of January 15, 1987 ("Indenture"), between the

Corporation and the Trustee. The terms of the Debenture include those stated in the Indenture and those made part of the Indenture by reference to the Trust Indenture Act of 1939 (15 U.S.C. §§77aaa-77bbb) as in effect on the date of the Indenture. The Debentures are subject to all such terms, and Debentureholders are referred to the Indenture and the Act for a statement of such terms. The Debentures are unsecured general obligations of the Corporation limited to \$15,000,000 in the aggregate principal amount.

5. Redemption at Corporation's Option.

The Corporation may, at its option, at any time on or after March 1, 1988, redeem all the Debentures or some of them from time to time after issuance at the following redemption prices (expressed in percentages of principal amount of the Debenture) plus unpaid accrued interest to the redemption date.

If redeemed during the 12-month period beginning March 1:

<u>Year</u>	<u>Percentage</u>	<u>Year</u>	<u>Percentage</u>
1988	106.0	1995	102.5
1989	105.5	1996	102.0
1990	105.0	1997	101.5
1991	104.5	1998	101.0
1992	104.0	1999	100.5
1993	103.5	2000 until	100.0
1994	103.0	stated maturity	

6. Notice of Redemption.

Notice of redemption at the Corporation's option will be mailed at least 30 days but not more than 60 days before the redemption date to each holder of Debentures to be redeemed at his registered address as set forth in the register. Debentures in denominations larger than \$1,000 may be redeemed in part but only in integral multiples of \$1,000. On and after the redemption date (if there is no default in the payment of the redemption price by the Corporation), interest ceases to accrue on Debentures or portions thereof called for redemption.

7. Redemption Upon Death of Debentureholder or Beneficial Owner.

The Corporation will redeem a Debenture or a portion of a Debenture (in the principal amount of \$1,000 or integral multiples thereof) within 60 days following receipt by the Trustee of a request therefor from a Qualified Institution on behalf of a deceased beneficial owner or a deceased Debentureholder's personal representative, or surviving joint tenant, tenant by the entirety or tenant in common, subject to the limitations that the Corporation will not be obligated to redeem during any twelve-month period ending on any March 1:

(1) Debentures presented on behalf of any deceased beneficial owner or deceased Debentureholder exceeding an aggregate principal amount of \$25,000 or (2) Debentures presented by all deceased beneficial owners and deceased Debentureholders exceeding \$600,000 in aggregate principal amount. If the Corporation, although not obligated to do so, chooses to redeem Debentures of any deceased beneficial owner or deceased Debentureholder in any such twelve-month period in excess of the \$25,000 limitation, such redemption, to the extent that it exceeds the \$25,000 limitation for any deceased beneficial owner or deceased Debentureholder shall not be included in the computation of the \$600,000 limitation for such period or any succeeding period.

Debentures presented on behalf of a deceased beneficial owner or a deceased Debentureholder will be redeemed in the order of their receipt by the Trustee. Debentures presented on behalf of a deceased beneficial owner or a deceased Debentureholder not redeemed in a period because of the \$25,000 or \$600,000 limitations will be held for redemption during the following twelve-month period(s) until redeemed, unless sooner withdrawn by the person presenting the Debenture for redemption.

8. Redemption Procedure.

Debentures may be presented for redemption on behalf of a deceased beneficial owner or a deceased Debentureholder by delivering to the Trustee: (1) a written request for redemption signed by an authorized officer of a Qualified Institution holding such Debenture on behalf of such deceased Debentureholder or by such deceased Debentureholder's personal representatives or surviving joint tenant, or tenant by the entirety, or tenant in common, (2) the Debenture to be redeemed, and (3) appropriate evidence of death and, if the request is made by a personal representative of a deceased Debentureholder, appropriate evidence of authority. No particular forms of request for redemption or evidence of death or authority to request redemption are required but each must be in a form satisfactory to the Trustee. The price to be paid by the Corporation for all Debentures presented to it pursuant to the provisions described in this paragraph is 100% of the principal amount thereof plus accrued unpaid interest to the date of payment. Any acquisition of Debentures by the Corporation or its Subsidiaries in excess of the limitations described herein or made on the open market shall not be included in the computation of either the \$25,000 or \$600,000 limitations for any period.

For purposes of this paragraph, a Debenture held in joint tenancy, tenancy by the entirety, or tenancy in common will be deemed to be held by a single Debentureholder and the death of a joint tenant, tenant by the entirety or tenant in common will be deemed to be the death of a Debentureholder. The death of a person, who, during his lifetime, was entitled

to substantially all of the beneficial ownership interest of a Debenture will be deemed the death of the Debentureholder, regardless of the registered Debentureholder, if such beneficial interest can be established to the satisfaction of the Trustee. Such beneficial interest shall be deemed to exist in typical cases of street name or nominee ownership, ownership under the Uniform Gifts to Minors Act, community property or other joint ownership arrangements between a husband and wife (including individual retirement accounts or Keogh [H.R. 10] plans maintained solely by or for the decedent, or by or for the decedent and his or her spouse), and trust and certain other arrangements where one person has substantially all of the beneficial ownership interest in the Debenture during his lifetime. Beneficial interest shall include the power to sell, transfer or otherwise dispose of a Debenture and the right to receive the proceeds therefrom, as well as interest and principal payable with respect thereto.

In the case of a Debenture presented for redemption by a Qualified Institution (as such term is defined in the Indenture), on behalf of deceased beneficial owners, the \$25,000 limitation shall apply to each such beneficial owner and the death of such beneficial owner shall entitle a Qualified Institution to seek redemption of such Debentures as if the deceased beneficial owner were the Debentureholder. A Qualified Institution, in its request for redemption on behalf of such beneficial owners, must submit evidence, satisfactory to the Trustee, that it holds Debentures on behalf of such beneficial owners and must certify that the aggregate requests for redemption tendered by such Qualified Institution on behalf of each such beneficial owner in any such twelve-month period does not exceed \$25,000. In addition, any request for redemption made by a Qualified Institution on behalf of a beneficial owner must be delivered to the Trustee by registered mail, return receipt requested.

In the case of a Debenture which is presented for redemption in part only, upon such redemption, the Corporation shall execute and the Trustee shall authenticate and deliver to, or on order of, the presenting person a new Debenture in the principal amount equal to the unredeemed portion of the principal of the Debenture so presented.

In the case of any Debenture which is presented for redemption pursuant to this paragraph and which has not been redeemed at the time the Corporation gives notice of its election to redeem Debentures pursuant to paragraph 5, such Debenture shall first be subject to redemption pursuant to paragraph 5 and if any such Debenture or portion thereof is not redeemed pursuant to paragraph 5 it shall remain subject to redemption pursuant to this paragraph.

Any Debenture presented for redemption upon the death of the Debentureholder or beneficial owner thereof may be withdrawn by the person presenting the same upon delivery of a written request for such withdrawal given to the Trustee prior to issuance of the check in redemption of the Debenture.

9. Conversion.

A holder of a Debenture may convert it into Common Stock of the Corporation at any time before the close of business on March 1, 2012. If the Debenture is called for redemption, the holder may convert the Debenture at any time before the close of business on the redemption date. The initial conversion price is \$29.85 per share, subject to adjustments due to certain events set forth in the Indenture. The number of shares of Common Stock issuable upon conversion of a Debenture is determined by dividing the principal amount to be converted by the conversion price in effect on the conversion date. On conversion, no payment or adjustment for interest will be made. The Corporation will issue a check in lieu of the issuance of a fraction of a share.

To convert a Debenture, a holder must (1) complete and sign the conversion notice on the back of the Debenture, (2) surrender the Debenture to the Conversion Agent, (3) furnish appropriate endorsements and transfer documents if required by the Registrar and the Conversion Agent, and (4) pay any transfer or similar tax if required. A holder may convert a portion of a Debenture if the portion is \$1,000 or an integral multiple thereof.

The conversion price will be adjusted for dividends or distributions on Common Stock payable in the Corporation's stock; subdivisions, combinations and certain reclassifications of Common Stock; distributions to all holders of Common Stock of certain rights to purchase Common Stock at less than the then current market value; and distributions to such holders of assets or debt securities of the Corporation or certain rights to purchase securities of the Corporation (excluding cash dividends or distributions from current or retained earnings). However, (1) no adjustment will be made unless the cumulative effect on the conversion price of all such dividends, distributions, subdivisions, combinations and reclassifications shall exceed 1% or the cumulative effect of all such distributions shall exceed 5%, and (2) no adjustment need be made if holders may participate in the transaction or in certain other cases set forth in the Indenture. The Corporation may, from time to time, voluntarily reduce the conversion price for a period of time.

If the Corporation is a party to a consolidation or merger or a transfer or lease of all or substantially all of its assets, the right to convert a Debenture into Common Stock

may be changed into a right to convert the Debenture into securities, cash or other assets of the Corporation or another corporation.

10. Denominations, Transfer, Exchange.

The Debentures are in registered form without coupons in denominations of \$1,000 and integral multiples thereof. The transfer of Debentures may be registered and Debentures may be exchanged as provided in the Indenture. The Registrar may require a holder, among other things, to furnish appropriate endorsements and transfer documents and to pay any taxes and fees required by law or permitted by the Indenture. The Registrar need not exchange or register the transfer of any Debenture or portion of a Debenture selected for redemption. Also, it need not exchange or register the transfer of any Debentures for a period of 15 days before a selection of Debentures to be redeemed.

11. Persons Deemed Owners.

The registered holder of a Debenture may be treated as its owner for all purposes.

12. Amendments, Supplements and Waivers.

Subject to certain exceptions, the Indenture or the Debenture may be amended or supplemented, and any existing default may be waived, with the consent of holders of a majority in principal amount of the Debentures then outstanding. Without the consent of any Debentureholder, the Indenture or the Debentures may be amended to cure any ambiguity, defect or inconsistency, to provide for assumption of the Corporation's obligations to Debentureholders or to make any change that does not adversely affect the rights of any Debentureholder.

13. Defaults and Remedies.

The principal hereof may be declared due prior to the maturity date hereinbefore named upon the occurrence of an Event of Default as the Indenture provides.

An Event of Default is: default for 30 days in payment of interest on the Debentures; default in payment of principal on the Debentures; failure by the Corporation for 90 days after notice to it to comply with any of its other agreements in the Indenture or the Debentures; default in the payment of indebtedness having an outstanding principal balance of \$10,000,000 or more under certain circumstances; and certain events of bankruptcy or insolvency. If an Event of Default occurs and is continuing, the Trustee or the holders of at least 25% in principal amount of the Debentures may declare all

the Debentures to be due and payable immediately. Debentureholders may not enforce the Indenture or the Debentures except as provided in the Indenture. The Trustee may require indemnity satisfactory to it before it enforces the Indenture or the Debenture. Subject to certain limitations, holders of a majority in principal amount of the Debentures may direct the Trustee in its exercise of any trust or power. The Trustee may withhold from Debentureholders notice of any continuing default (except a default in payment of principal or interest) if it determines that withholding notice is in their interests. The Corporation must furnish an annual compliance certificate to the Trustee.

14. Trustee Dealings with Corporation.

Centerre Trust Company of St. Louis, the Trustee under the Indenture, in its individual or any other capacity, may make loans to, accept deposits from, and perform services for the Corporation or its Affiliates, and may otherwise deal with the Corporation or its Affiliates, as if it were not the Trustee.

15. No Recourse Against Others.

A director, officer, employee or stockholder, as such, of the Corporation shall not have any liability for any obligations of the Corporation under the Debenture or the Indenture or for any claim based on, in respect of or by reason of such obligations or their creation. Each Debentureholder by accepting a Debenture waives and releases all such liability. The waiver and release are part of the consideration for the issue of the Debentures.

16. Authentication.

This Debenture shall not be valid until authenticated by the manual signature of the Trustee or an authenticating agent.

17. Abbreviations.

Customary abbreviations may be used in the name of a Debentureholder or an assignee, such as TEN COM (= tenants in common), TEN ENT (= tenants by the entireties), JT TEN (= joint tenants with right of survivorship and not as tenants in common), CUST (= Custodian), and U/G/M/A (= Uniform Gifts to Minors Act).

EXECUTED IN 40 COUNTERPARTS OF
WHICH THIS IS COUNTERPART NO. 36

NORTHWEST NATURAL GAS COMPANY

TO

BANKERS TRUST COMPANY

AND

STANLEY BURG (SUCCESSOR TO R. G. PAGE AND J. C. KENNEDY),

As Trustees under the Mortgage and
Deed of Trust, dated as of July 1,
1946, of Portland Gas & Coke Company
(now Northwest Natural Gas Company)

SIXTEENTH SUPPLEMENTAL INDENTURE
providing among other things for
First Mortgage Bonds, 9.80% Series due 2018

Dated as of November 1, 1988

SIXTEENTH SUPPLEMENTAL INDENTURE

INDENTURE, dated as of the 1st day of November, 1988, made and entered into by and between NORTHWEST NATURAL GAS COMPANY (formerly Portland Gas & Coke Company), a corporation of the State of Oregon, whose post office address is One Pacific Square, 220 N.W. Second Avenue, Portland, Oregon 97209 (hereinafter sometimes called the Company), party of the first part, and BANKERS TRUST COMPANY, a corporation of the State of New York, whose post office address is Four Albany Street, New York, New York 10015 (hereinafter sometimes called the Corporate Trustee) and STANLEY BURG (successor to R. G. PAGE and J. C. KENNEDY), whose post office address is c/o Bankers Trust Company, Four Albany Street, New York, New York 10015 (hereinafter sometimes called the Co-Trustee), parties of the second part (the Corporate Trustee and the Co-Trustee being hereinafter together sometimes called the Trustees), as Trustees under the Mortgage and Deed of Trust, dated as of July 1, 1946 (hereinafter called the Mortgage), executed and delivered by Portland Gas & Coke Company (now Northwest Natural Gas Company) to secure the payment of bonds issued or to be issued under and in accordance with the provisions of the Mortgage, this indenture (hereinafter called Sixteenth Supplemental Indenture) being supplemental thereto;

WHEREAS the Mortgage was or is to be recorded in the official records of various counties in the States of Oregon and Washington which counties include or will include all counties in which this Sixteenth Supplemental Indenture is to be recorded; and

WHEREAS by the Mortgage the Company covenanted that it would execute and deliver such supplemental indenture or indentures and such further instruments and do such further acts as might be necessary or proper to carry out more effectually the purposes of the Mortgage and to make subject to the lien of the Mortgage any property thereafter acquired, made or constructed and intended to be subject to the lien thereof; and

WHEREAS the Company executed and delivered to the Trustees its First Supplemental Indenture, dated as of June 1, 1949 (hereinafter called its First Supplemental Indenture), its Second Supplemental Indenture, dated as of March 1, 1954 (hereinafter called its Second Supplemental Indenture), its Third Supplemental Indenture, dated as of April 1, 1956 (hereinafter called its Third Supplemental Indenture), its Fourth Supplemental Indenture, dated as of

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February 1, 1959 (hereinafter called its Fourth Supplemental Indenture), its Fifth Supplemental Indenture, dated as of July 1, 1961 (hereinafter called its Fifth Supplemental Indenture), its Sixth Supplemental Indenture, dated as of January 1, 1964 (hereinafter called its Sixth Supplemental Indenture), its Seventh Supplemental Indenture, dated as of March 1, 1966 (hereinafter called its Seventh Supplemental Indenture), its Eighth Supplemental Indenture, dated as of December 1, 1969 (hereinafter called its Eighth Supplemental Indenture), its Ninth Supplemental Indenture, dated as of April 1, 1971 (hereinafter called its Ninth Supplemental Indenture), its Tenth Supplemental Indenture, dated as of January 1, 1975 (hereinafter called its Tenth Supplemental Indenture), its Eleventh Supplemental Indenture, dated as of December 1, 1975 (hereinafter called its Eleventh Supplemental Indenture), its Twelfth Supplemental Indenture, dated as of July 1, 1981 (hereinafter called its Twelfth Supplemental Indenture), its Thirteenth Supplemental Indenture, dated as of June 1, 1985 (hereinafter called its Thirteenth Supplemental Indenture) and its Fourteenth Supplemental Indenture, dated as of November 1, 1985 (hereinafter called its Fourteenth Supplemental Indenture); and

WHEREAS said First through Fourteenth Supplemental Indentures were filed for record, and were recorded and indexed, as a mortgage of both real and personal property, in the official records of various counties in the States of Oregon and Washington which counties include or will include all counties in which this Sixteenth Supplemental Indenture is to be recorded; and

WHEREAS the Company executed and delivered to the Trustees its Fifteenth Supplemental Indenture, dated as of July 1, 1986 (hereinafter called its Fifteenth Supplemental Indenture); and

WHEREAS said Fifteenth Supplemental Indenture was filed for record, and was recorded and indexed, as a mortgage of both real and personal property, and financing statements were filed, in the official records of the several counties and other offices in the States of Oregon and Washington listed below, as follows:

OREGON

Real Property Mortgage Records

<u>County</u>	<u>Date Recorded</u>	<u>Book, Film or Reel</u>	<u>Page</u>
Benton	July 3, 1986	M-78662-86	-
Clackamas	July 7, 1986	86 24733	-
Clatsop	July 3, 1986	658	288
Columbia	July 3, 1986	197	114
Coos	July 7, 1986	86-3-2413	-
Douglas	July 3, 1986	951	551
Hood River	July 3, 1986	861198	-
Lane	July 21, 1986	1411R (#8627177)	-
Lincoln	July 7, 1986	172	809
Linn	July 3, 1986	414	743
Marion	July 3, 1986	472	468
Multnomah	July 3, 1986	1918	305
Polk	July 3, 1986	195	731
Tillamook	July 3, 1986	304	575
Wasco	July 3, 1986	861538	-
Washington	July 3, 1986	86028953	-
Yamhill	July 7, 1986	204	1510

Filed as a Financing Statement

<u>Office</u>	<u>Date Filed for Record</u>	<u>File No.</u>
Secretary of State	July 3, 1986	K 52983

WASHINGTON

Real Property Mortgage Records

<u>County</u>	<u>Date Recorded</u>	<u>Book, Film or Reel</u>	<u>Page</u>
Clark	July 3, 1986	399	1
Klickitat	July 3, 1986	138	112
Skamania	July 3, 1986	101	752

Filed as a Financing Statement

<u>Office</u>	<u>Date Filed for Record</u>	<u>File Number</u>
Secretary of State	July 3, 1986	86-188-0036

; and

WHEREAS an instrument dated as of June 14, 1951, was executed by the Company appointing J. C. Kennedy as Co-Trustee in succession to said R. G. Page (resigned) under the Mortgage and by J. C. Kennedy accepting the appointment as Co-Trustee under the Mortgage in succession to the said R. G. Page, which instrument was recorded in various counties in the States of Oregon and Washington; and

WHEREAS, in the Ninth Supplemental Indenture STANLEY BURG was appointed by the Company as Co-Trustee under the Mortgage in succession to said J. C. KENNEDY (resigned) and in the Ninth Supplemental Indenture Stanley Burg accepted such appointment as Co-Trustee under the Mortgage in succession to said J. C. Kennedy; and

WHEREAS in addition to the property described in the Mortgage, as heretofore supplemented, the Company has acquired certain other property, rights and interests in property; and

WHEREAS, the Company has heretofore issued, in accordance with the provisions of the Mortgage, as supplemented, the following series of First Mortgage Bonds:

<u>Series</u>	<u>Principal Amount Outstanding</u>
4-3/4% Series due 1989.....	\$ 4,200,000
5-3/4% Series due 1991.....	\$ 9,765,000
9-3/8% Series due 1974.....	None
8-5/8% Series due 1996.....	\$12,951,000
12 % Series due 1984.....	None
10-1/2% Series due 1986.....	None
14-3/4% Series due 1989.....	None
10-1/8% Series due 1995.....	\$15,000,000
10.35% Series due November 1, 1997.....	\$15,000,000
9-3/8% Series due 2011.....	\$50,000,000

; and

WHEREAS Section 8 of the Mortgage provides that the form of each series of bonds (other than the First

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Series) issued thereunder shall be established by Resolution of the Board of Directors of the Company; that the form of such series, as established by said Board of Directors, shall specify the descriptive title of the bonds and various other terms thereof; and that such Series may also contain such provisions not inconsistent with the provisions of the Mortgage as the Board of Directors may, in its discretion, cause to be inserted therein expressing or referring to the terms and conditions upon which such bonds are to be issued and/or secured under the Mortgage; and

WHEREAS Section 120 of the Mortgage provides, among other things, that any power, privilege or right expressly or impliedly reserved to or in any way conferred upon the Company by any provision of the Mortgage, whether such power, privilege or right is in any way restricted or is unrestricted, may (to the extent permitted by law) be in whole or in part waived or surrendered or subjected to any restriction if at the time unrestricted or to additional restriction if already restricted, and the Company may enter into any further covenants, limitations or restrictions for the benefit of any one or more series of bonds issued thereunder, or the Company may cure any ambiguity contained therein or in any supplemental indenture or may (in lieu of establishment by Resolution as provided in Section 8 of the Mortgage) establish the terms and provisions of any series of bonds other than said First Series, by an instrument in writing executed and acknowledged by the Company in such manner as would be necessary to entitle a conveyance of real estate to record in all of the states in which any property at the time subject to the lien of the Mortgage shall be situated; and

WHEREAS the Company now desires to create a new series of bonds and (pursuant to the provisions of Section 120 of the Mortgage) to add to its covenants and agreements contained in the Mortgage, as heretofore supplemented, certain other covenants and agreements to be observed by it and to alter and amend in certain respects the covenants and provisions contained in the Mortgage, as heretofore supplemented and amended; and

WHEREAS the execution and delivery by the Company of this Sixteenth Supplemental Indenture, and the terms of the bonds of the Seventeenth Series hereinafter referred to, have been duly authorized by the Board of Directors of the Company by appropriate resolutions of said Board of Directors;

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NOW, THEREFORE, THIS INDENTURE WITNESSETH:

That Northwest Natural Gas Company, in consideration of the premises and of One Dollar to it duly paid by the Trustees at or before the ensembling and delivery of these presents, the receipt whereof is hereby acknowledged, and in further assurance of the estate, title and rights of the Trustees, and in order further to secure the payment both of the principal of and interest and premium, if any, on the bonds from time to time issued under the Mortgage, according to their tenor and effect, and the performance of all the provisions of the Mortgage (including any instruments supplemental thereto and any modification made as in the Mortgage provided) and of said bonds, hereby grants, bargains, sells, releases, conveys, assigns, transfers, mortgages, pledges, sets over and confirms (subject, however, to Excepted Encumbrances, as defined in Section 6 of the Mortgage) unto Stanley Burg and (to the extent of its legal capacity to hold the same for the purposes hereof) to Bankers Trust Company, as Trustees under the Mortgage, and to their successor or successors in said trust, and to said Trustees and their successors and assigns forever, all property, real, personal and mixed, acquired by the Company after the date of the Mortgage, of the kind or nature specifically mentioned in Article XXI of the Mortgage or of any other kind or nature (except any herein or in the Mortgage expressly excepted) now owned or, subject to the provisions of subsection (I) of Section 87 of the Mortgage, hereafter acquired by the Company (by purchase, consolidation, merger, donation, construction, erection or in any other way) and wheresoever situated, including (without in anywise limiting or impairing by the enumeration of the same the scope and intent of the foregoing) all lands, gas plants, by-product plants, gas holders, gas mains and pipes; all power sites, water rights, reservoirs, canals, raceways, dams, aqueducts, and all other rights or means for appropriating, conveying, storing and supplying water; all rights of way and roads; all plants for the generation of electricity by steam, water and/or other power; all power houses, street lighting systems, standards and other equipment incidental thereto, telephone, radio, television and air-conditioning systems and equipment incidental thereto, water works, water systems, steam heat and hot water plants, substations, lines, service and supply systems, bridges, culverts, tracts, ice or refrigeration plants and equipment, offices, buildings and other structures and the equipment thereof; all machinery, engines, boilers, dynamos, gas, electric and other machines, regulators, meters, transformers, generators, motors, gas, electrical and mechanical appliances, conduits, cables, gas, water, steam heat

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or other pipes, service pipes, fittings, valves and connections, pole and transmission lines, wires, cables, tools, implements, apparatus, furniture and chattels; all franchises, consents or permits; all lines for the transmission and distribution of gas, electric current, steam heat or water for any purpose including mains, pipes, conduits, towers, poles, wires, cables, ducts and all apparatus for use in connection therewith; all real estate, lands, easements, servitudes, licenses, permits, franchises, privileges, rights of way and other rights in or relating to public or private property, real or personal, or the occupancy of such property and (except as herein or in the Mortgage, as heretofore supplemented, expressly excepted) all right, title and interest the Company may now have or may hereafter acquire in and to any and all property of any kind or nature wheresoever situated.

TOGETHER WITH all and singular the tenements, hereditaments, prescriptions, servitudes and appurtenances belonging or in anywise appertaining to the aforementioned property or any part thereof, with the reversion and reversions, remainder and remainders and (subject to the provisions of Section 57 of the Mortgage) the tolls, rents, revenues, issues, earnings, income, product and profits thereof, and all the estate, right, title and interest and claim whatsoever, at law as well as in equity, which the Company now has or may hereafter acquire in and to the aforementioned property and franchises and every part and parcel thereof.

IT IS HEREBY AGREED by the Company that, subject to the provisions of subsection (I) of Section 87 of the Mortgage, all the property, rights, and franchises acquired by the Company (by purchase, consolidation, merger, donation, construction, erection or in any other way) after the date hereof, except any herein or in the Mortgage, as heretofore supplemented, expressly excepted, shall be and are as fully granted and conveyed hereby and by the Mortgage, and as fully embraced within the lien hereof and the lien of the Mortgage, as supplemented, as if such property, rights and franchises were now owned by the Company and were specifically described herein or in the Mortgage, as heretofore supplemented, and conveyed hereby or thereby. Provided that the following are not and are not intended to be now or hereafter granted, bargained, sold, released, conveyed, assigned, transferred, mortgaged, pledged, set over or confirmed hereunder and are hereby expressly excepted from the lien and operation of this Sixteenth Supplemental Indenture and from the lien and operation of the Mortgage, as heretofore supplemented, viz: (1) cash, shares of stock, bonds, notes and other

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obligations and other securities not hereafter specifically pledged, paid, deposited, delivered or held under the Mortgage, as heretofore supplemented, or covenanted so to be; (2) merchandise, equipment, apparatus, materials or supplies held for the purpose of sale or other disposition in the usual course of business; fuel, oil and similar materials and supplies consumable in the operation of any of the properties of the Company; all aircraft, tractors, rolling stock, trolley coaches, buses, motor coaches, automobiles, motor trucks, and other vehicles and materials and supplies held for the purpose of repairing or replacing (in whole or in part) any of the same; (3) bills, notes and accounts receivable, judgments, demands and choses in action, and all contracts, leases and operating agreements not specifically pledged under the Mortgage, as heretofore supplemented, or covenanted so to be; (4) the last day of the term of any lease or leasehold which may be or become subject to the lien of the Mortgage; (5) gas, petroleum, carbon, chemicals, light oils, tar products, electric energy, steam, water, ice, and other materials or products, manufactured, stored, generated, produced, purchased or acquired by the Company for sale, distribution or use in the ordinary course of its business; all timber, minerals, mineral rights and royalties and all Natural Gas and Oil Production Property, as defined in Section 4 of the Mortgage; and (6) the Company's franchise to be a corporation; provided, however, that the property and rights expressly excepted from the lien and operation of this Sixteenth Supplemental Indenture and from the lien and operation of the Mortgage, as heretofore supplemented, in the above subdivisions (2) and (3) shall (to the extent permitted by law) cease to be so excepted in the event and as of the date that either or both of the Trustees or a receiver or trustee shall enter upon and take possession of the Mortgaged and Pledged Property in the manner provided in Article XIII of the Mortgage by reason of the occurrence of a Default as defined in Section 65 thereof.

TO HAVE AND TO HOLD all such properties, real, personal and mixed, granted, bargained, sold, released, conveyed, assigned, transferred, mortgaged, pledged, set over or confirmed by the Company as aforesaid, or intended so to be, unto Stanley Burg and (to the extent of its legal capacity to hold the same for the purposes hereof) to Bankers Trust Company, as Trustees, and their successors and assigns forever.

IN TRUST NEVERTHELESS, for the same purposes and upon the same terms, trusts and conditions and subject to and with the same provisos and covenants as are set forth

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in the Mortgage, as heretofore supplemented, this Sixteenth Supplemental Indenture being supplemental thereto.

AND IT IS HEREBY COVENANTED by the Company that all the terms, conditions, provisos, covenants and provisions contained in the Mortgage, as heretofore supplemented, shall affect and apply to the property hereinbefore described and conveyed, and to the estates, rights, obligations and duties of the Company and the Trustees and the beneficiaries of the trust with respect to said property, and to the Trustees and their successors in the trust, in the same manner and with the same effect as if the said property had been owned by the Company at the time of the execution of the Mortgage, and had been specifically and at length described in and conveyed to said Trustees by the Mortgage as a part of the property therein stated to be conveyed.

The Company further covenants and agrees to and with the Trustees and their successors in said trust under the Mortgage, as follows:

ARTICLE I.

Seventeenth Series of Bonds.

SECTION 1.01. There shall be a series of bonds designated "9.80% Series due 2018" (herein sometimes referred to as the "Seventeenth Series"), each of which shall also bear the descriptive title First Mortgage Bond, and the form thereof, which shall be established by Resolution of the Board of Directors of the Company, shall contain suitable provisions with respect to the matters hereinafter in this Article I and in Articles II and III specified. Bonds of the Seventeenth Series shall be limited to \$25,000,000, in aggregate principal amount at any one time Outstanding except as provided in Section 16 of the Mortgage and shall mature on November 1, 2018, and shall be issued as fully registered bonds in denominations of One Thousand Dollars and, at the option of the Company, in any multiple or multiples of One Thousand Dollars (the exercise of such option to be evidenced by the execution and delivery thereof). Bonds of the Seventeenth Series shall bear interest at the rate of 9.80% per annum, the first interest payment to be made May 1, 1989 for the period from the date of first authentication by the Corporate Trustee of bonds of the Seventeenth Series to May 1, 1989, with subsequent interest payments to be made semi-annually on November 1 and May 1 of each year; and the principal of, premium, if any, and interest on each

said bond shall be payable at the office or agency of the Company in the Borough of Manhattan, The City of New York, in such coin or currency of the United States of America as at the time of payment is legal tender for public and private debts. Bonds of the Seventeenth Series shall be dated as in Section 10 of the Mortgage provided.

Interest on bonds of the Seventeenth Series will also be payable on any interest payment date by electronic funds transfer to the account of any holder of bonds of said series in the aggregate principal amount of \$1,000,000 or more at a commercial bank located in the United States; provided that such bondholder requests electronic funds transfer and provides the Corporate Trustee with wire transfer instructions no later than ten days prior to such interest payment date.

Notice shall be given by or on behalf of the Company by first class mail, not less than thirty (30) days nor more than forty-five (45) days before the maturity date of the bonds of the Seventeenth Series, of such maturity date. Such notice shall be sent to each bondholder at his address appearing upon the registry books.

Bonds of the Seventeenth Series shall be redeemable either at the option of the Company or pursuant to the requirements of the Mortgage in whole at any time, or in part from time to time, prior to maturity, upon notice, as provided in Section 52 of the Mortgage, mailed at least thirty (30) days prior to the date fixed for redemption, at the following general redemption prices, expressed in percentages of the principal amount of the bonds to be redeemed:

GENERAL REDEMPTION PRICES

If redeemed during the 12 months period ending October 31,

1989.....105.00%	1999.....102.00%	2009.....100.00%
1990.....105.00%	2000.....101.50%	2010.....100.00%
1991.....105.00%	2001.....101.00%	2011.....100.00%
1992.....105.00%	2002.....100.50%	2012.....100.00%
1993.....105.00%	2003.....100.50%	2013.....100.00%
1994.....104.50%	2004.....100.00%	2014.....100.00%
1995.....104.00%	2005.....100.00%	2015.....100.00%
1996.....103.50%	2006.....100.00%	2016.....100.00%
1997.....103.00%	2007.....100.00%	2017.....100.00%
1998.....102.50%	2008.....100.00%	2018.....100.00%

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in each case, together with accrued interest to the date fixed for redemption; provided, however, that no bonds of the Seventeenth Series may be redeemed at said general redemption prices prior to November 1, 1993, as part of any refunding operation involving, directly or indirectly, the incurring of indebtedness by the Company having a cost (calculated in accordance with acceptable financial practice) lower than 10.29% per annum.

Bonds of the Seventeenth Series shall also be redeemable in whole at any time, or in part from time to time, prior to maturity, upon like notice, by the application (either at the option of the Company or pursuant to the requirements of the Mortgage) of cash deposited with the Corporate Trustee pursuant to the provisions of Section 64 of the Mortgage (so long as any bonds of the Seventh, Eighth or Tenth Series remain Outstanding) or with the Proceeds of Released Property, at the following special redemption prices, expressed in percentages of the principal amount of the bonds to be redeemed:

SPECIAL REDEMPTION PRICES

If redeemed during the 12 months period ending October 31,

1989.....100.00%	1999.....100.00%	2009.....100.00%
1990.....100.00%	2000.....100.00%	2010.....100.00%
1991.....100.00%	2001.....100.00%	2011.....100.00%
1992.....100.00%	2002.....100.00%	2012.....100.00%
1993.....100.00%	2003.....100.00%	2013.....100.00%
1994.....100.00%	2004.....100.00%	2014.....100.00%
1995.....100.00%	2005.....100.00%	2015.....100.00%
1996.....100.00%	2006.....100.00%	2016.....100.00%
1997.....100.00%	2007.....100.00%	2017.....100.00%
1998.....100.00%	2008.....100.00%	2018.....100.00%

in each case, together with accrued interest to the date fixed for redemption.

ARTICLE II.

Redemption of Bonds of the Seventeenth Series upon Death of the Bondholder or Beneficial Owner.

SECTION 2.01. The Company shall redeem any bond of the Seventeenth Series, or a portion of a bond (in the principal amount of \$1,000 or integral multiples thereof), within sixty (60) days following receipt by the Corporate

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Trustee of a request therefor, in accordance with Section 2.02, (A) from a bank, trust company or broker-dealer, which represents in writing that it is a member of a national securities exchange or the National Association of Securities Dealers, Inc. (each hereinafter referred to as a "Qualified Institution"), holding such bond for a deceased beneficial owner, (B) from a registered holder of a bond (other than a Qualified Institution) holding such bond for a deceased beneficial owner or (C) from a deceased bondholder's personal representative, surviving joint tenant, tenant by the entirety or tenant in common, subject to the limitations that the Company shall not be obligated to redeem during any twelve-month period ending on any October 31: (i) the portion of a bond or bonds presented on behalf of a deceased beneficial owner or deceased bondholder exceeding an aggregate principal amount of \$25,000 or (ii) bonds presented on behalf of all deceased beneficial owners and deceased bondholders exceeding \$1,000,000 in aggregate principal amount. If the Company, although not obligated to do so, chooses to redeem a portion of a bond or bonds of any deceased beneficial owner or deceased bondholder in any such twelve-month period in excess of the \$25,000 limitation, such redemption, to the extent that it exceeds such \$25,000 limitation, shall not be included in the computation of the \$1,000,000 limitation for such period or any succeeding period or the \$25,000 limitation for any succeeding period. Any acquisition of bonds by the Company, other than by redemption upon the death of a beneficial owner or bondholder pursuant to this Article II, shall not be included in the computation of either the \$25,000 or the \$1,000,000 limitation for any period.

SECTION 2.02. Bonds of the Seventeenth Series which are to be redeemed pursuant to this Article II shall be redeemed in accordance with the provisions set forth in this Article II, notwithstanding anything to the contrary in the Mortgage; provided, however, that the provisions of Section 56 of the Mortgage shall apply to bonds redeemed pursuant to this Article II. Bonds shall be redeemed in the order of their receipt by the Corporate Trustee, except as hereinafter provided. Any bond or portion thereof not redeemed in any such twelve-month period because of the \$25,000 or \$1,000,000 limitation shall be held in order of receipt for redemption during the following twelve-month period(s) until redeemed unless sooner withdrawn in accordance with Section 2.03.

Bonds may be presented on behalf of a deceased beneficial owner or a deceased bondholder for redemption by delivering to the Corporate Trustee: (1) a written

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request for redemption signed by an authorized officer of a Qualified Institution or by the registered holder of a bond (other than a Qualified Institution) holding such bond for a deceased beneficial owner or by the deceased bondholder's personal representative, surviving joint tenant, tenant by the entirety or tenant in common, (2) the bond(s) to be redeemed and (3) a certificate evidencing the death of the beneficial owner or bondholder and appropriate evidence of authority in the case of a request by a personal representative. No particular forms of request for redemption or evidence of authority to request redemption shall be required, but each must be in a form satisfactory to the Corporate Trustee. The redemption price to be paid by the Company for all bonds presented to it pursuant to this Article II shall be 100% of the principal amount of the bonds to be redeemed, together with accrued interest to the date of redemption.

For purposes of this Article II, a bond held in joint tenancy, tenancy by the entirety or tenancy in common shall be deemed to be held by a single bondholder and the death of any such joint tenant, tenant by the entirety or tenant in common shall be deemed to be the death of such bondholder. The death of a person, who, during his lifetime, was entitled to substantially all of the beneficial ownership interest of a bond shall be deemed to be the death of the bondholder, regardless of the registered bondholder, if such beneficial interest shall be established by a certificate evidencing the same which is delivered to the Corporate Trustee. Such beneficial interest shall be deemed to exist in cases of street name or nominee ownership, ownership under the Uniform Gifts to Minors Act of any jurisdiction, community property or other joint ownership arrangements between a husband and wife (including, without limitation, individual retirement accounts or Keogh [H.R. 10] plans maintained solely by or for the decedent or by or for the decedent and his spouse), and trust and other arrangements where one person has substantially all of the beneficial ownership interest in the bond during his lifetime. Beneficial interest shall include the power to sell, transfer or otherwise dispose of a bond and the right to receive the proceeds therefrom, as well as interest and principal payable with respect thereto.

In the case of a bond or bonds presented for redemption by a Qualified Institution on behalf of a deceased beneficial owner, the \$25,000 limitation shall apply to each such beneficial owner. A Qualified Institution, in its request for redemption on behalf of a deceased beneficial owner, must submit evidence, satis-

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factory to the Corporate Trustee, that it holds the bond(s) on behalf of such beneficial owner and must certify as to the aggregate principal amount of bonds theretofore presented for redemption by such Qualified Institution on behalf of such beneficial owner and the date of each such presentation and the principal amount of bonds presented on each such date. In addition, any request for redemption made by a Qualified Institution on behalf of a deceased beneficial owner must be delivered to the Corporate Trustee by registered mail, return receipt requested.

On and after the date of redemption, except as hereinafter provided, bonds redeemed shall cease to bear interest and shall cease to be entitled to the benefit of the Lien of the Mortgage.

In the case of any bond which is redeemed in part only, upon such partial redemption, the Company shall execute and the Corporate Trustee shall authenticate and deliver without charge therefor to, or on the order of, the person presenting such bond for redemption a new bond or bonds in an aggregate principal amount equal to the unredeemed portion of the principal of the bond so presented. On and after the date of redemption, interest shall be payable only on the portion of each such bond not so redeemed and only such portion shall continue to be entitled to the benefit of the Lien of the Mortgage. Any such new bond or bonds representing a portion of a bond not redeemed in any twelve-month period because of the \$25,000 or \$1,000,000 limitation shall be held by the Corporate Trustee in accordance with the third sentence of the first paragraph of this Section 2.02.

In the case of any bond or portion thereof which is presented for redemption and which has not been redeemed at the time the Company mails notice of redemption of bonds pursuant to Article I, such bond or portion thereof shall first be subject to redemption pursuant to Article I and all or any part of such bond or portion thereof not called for redemption pursuant to Article I upon such notice shall then be subject to redemption pursuant to this Article II.

SECTION 2.03. Any bonds presented for redemption upon the death of the bondholder or the beneficial owner thereof may be withdrawn by the person presenting the same by written request for such withdrawal delivered to the Corporate Trustee prior to the issuance of a check in payment thereof.

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SECTION 2.04. The Corporate Trustee shall maintain at its corporate trust office a register in which it shall record, in order of receipt, all presentations for redemption received by the Corporate Trustee in accordance with this Article II. Unless withdrawn, all such requests shall remain in effect during the 12-month period in which they are received and thereafter from period to period, until the bonds which are the subject of such request have been redeemed.

ARTICLE III.

Exchanges and Transfers of Bonds of the Seventeenth Series.

SECTION 3.01. At the option of the registered owner, any bonds of the Seventeenth Series, upon surrender thereof, for cancellation, at the office or agency of the Company in the Borough of Manhattan, The City of New York, shall (subject to the provisions of Section 12 of the Mortgage) be exchangeable for a like aggregate principal amount of bonds of the same series of other authorized denominations.

Transfers of bonds of the Seventeenth Series may be registered (subject to the provisions of Section 12 of the Mortgage) at the office or agency of the Company in the Borough of Manhattan, The City of New York.

Upon any registration of transfer or exchange of bonds of the Seventeenth Series, the Company may make a charge therefor sufficient to reimburse it for any tax or taxes or other governmental charge, as provided in Section 12 of the Mortgage, but the Company hereby waives any right to make a charge in addition thereto for any registration or exchange or transfer of bonds of the Seventeenth Series.

ARTICLE IV.

Miscellaneous Provisions.

SECTION 4.01. Subject to the amendments provided for in this Sixteenth Supplemental Indenture, the terms defined in the Mortgage, as heretofore supplemented, shall, for all purposes of this Sixteenth Supplemental Indenture, have the meanings specified in the Mortgage, as heretofore supplemented.

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SECTION 4.02. The Trustees hereby accept the trusts hereby declared, provided, created or supplemented, and agree to perform the same upon the terms and conditions herein and in the Mortgage, as heretofore supplemented, set forth, including the following:

The Trustees shall not be responsible in any manner whatsoever for or in respect of the validity or sufficiency of this Sixteenth Supplemental Indenture or for or in respect of the recitals contained herein, all of which recitals are made by the Company solely. In general each and every term and condition contained in Article XVII of the Mortgage shall apply to and form part of this Sixteenth Supplemental Indenture with the same force and effect as if the same were herein set forth in full, with such omissions, variations and insertions, if any, as may be appropriate to make the same conform to the provisions of the Sixteenth Supplemental Indenture.

SECTION 4.03. Whenever in this Sixteenth Supplemental Indenture any of the parties hereto is named or referred to, this shall, subject to the provisions of Articles XVI and XVII of the Mortgage, be deemed to include the successors or assigns of such party, and all the covenants and agreements in this Sixteenth Supplemental Indenture contained by or on behalf of the Company or by or on behalf of the Trustees shall bind and inure to the benefit of the respective successors and assigns of such parties whether so expressed or not.

SECTION 4.04. Nothing in this Sixteenth Supplemental Indenture, expressed or implied, is intended, or shall be construed, to confer upon, or to give to, any person, firm or corporation, other than the parties hereto and the holders of the bonds and coupons outstanding under the Mortgage, any right, remedy, or claim under or by reason of this Sixteenth Supplemental Indenture or any covenant, condition, stipulation, promise or agreement hereof, and all the covenants, conditions, stipulations, promises and agreements by or on behalf of the Company as set forth in this Sixteenth Supplemental Indenture shall be for the sole and exclusive benefit of the parties hereto, and of the holders of the bonds and of the coupons outstanding under the Mortgage.

SECTION 4.05. This Sixteenth Supplemental Indenture has been executed in several identical counterparts, each of which shall be an original and all of which shall constitute but one and the same instrument.

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IN WITNESS WHEREOF, Northwest Natural Gas Company, party hereto of the first part, has caused its corporate name to be hereunto affixed, and this instrument to be signed and sealed by its President or one of its Vice Presidents, and its corporate seal to be attested by its Secretary or one of its Assistant Secretaries for and in its behalf on the 23rd day of November, 1988, as of November 1, 1988, in Portland, Oregon; Bankers Trust Company, one of the parties hereto of the second part, has caused its corporate name to be hereunto affixed, and this instrument to be signed and sealed by one of its Vice Presidents or one of its Assistant Vice Presidents and its corporate seal to be attested by one of its Assistant Secretaries; and Stanley Burg, one of the parties hereto of the second part, has hereunto set his hand and affixed his seal, all in The City of New York, on the 28th day of November, 1988, as of November 1, 1988.

NORTHWEST NATURAL GAS COMPANY

By *Bruce R. DeBarr*
Senior Vice President,
Finance and Administration

Attest:

Virginia Maloney
Assistant Secretary

Executed, sealed and delivered by
NORTHWEST NATURAL GAS COMPANY in
the presence of:

Susan R. Beauchamp

Leslie K. Aldrin

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BANKERS TRUST COMPANY, as Trustee,

By *Barbara A. Green*
Assistant Vice President

Attest:

V. Alan Fisher
Assistant Secretary

Stanley Burg
STANLEY BURG, as Trustee

Executed, sealed and
delivered by BANKERS TRUST
COMPANY and STANLEY BURG
in the presence of:

E. Richard Contant
Eric M. Hawner

STATE OF OREGON)
 : ss.:
COUNTY OF MULTNOMAH)

November 23, A.D. 1988.

Before me personally appeared ^{Senior} BRUCE R. DEBOLT, who, being duly sworn, did say that he is Vice President, Finance and Administration, of NORTHWEST NATURAL GAS COMPANY and that the seal affixed to the foregoing instrument is the corporate seal of said Corporation and that said instrument was signed and sealed in behalf of said Corporation by authority of its Board of Directors; and he acknowledged said instrument to be its voluntary act and deed.

^{Senior} On this 23rd day of November, 1988, before me personally appeared BRUCE R. DEBOLT, to me known to be Vice President, Finance and Administration of NORTHWEST NATURAL GAS COMPANY, one of the corporations that executed the within and foregoing instrument, and acknowledged said instrument to be the free and voluntary act and deed of said Corporation, for the uses and purposes therein mentioned, and on oath stated that he was authorized to execute said instrument and that the seal affixed is the corporate seal of said Corporation.

IN WITNESS WHEREOF I have hereunto set my hand and affixed my official seal the day and year first above written.

Delores J. Thrasher
DELORES J. THRASHER
Notary Public, State of Oregon
My Commission Expires October 8, 1989

STATE OF NEW YORK)
 : ss.:
COUNTY OF NEW YORK)

November 28, A.D. 1988.

Before me personally appeared BARBARA A. JOINER, who, being duly sworn, did say that she is an Assistant Vice President of BANKERS TRUST COMPANY and that the seal affixed to the foregoing instrument is the corporate seal of said Corporation and that said instrument was signed and sealed in behalf of said Corporation by authority of its Board of Directors; and she acknowledged said instrument to be its voluntary act and deed.

On this 28th day of November, 1988, before me personally appeared BARBARA A. JOINER, to me known to be an Assistant Vice President of BANKERS TRUST COMPANY, one of the corporations that executed the within and foregoing instrument, and acknowledged said instrument to be the free and voluntary act and deed of said Corporation, for the uses and purposes therein mentioned, and on oath stated that she was authorized to execute said instrument and that the seal affixed is the corporate seal of said Corporation.

IN WITNESS WHEREOF I have hereunto set my hand and affixed my official seal the day and year first above written.



DESIREE MARSHALL

Notary Public, State of New York

No. 24-4885294

Qualified in Kings County

Certificate Filed in New York County

Commission Expires February 17, 1989

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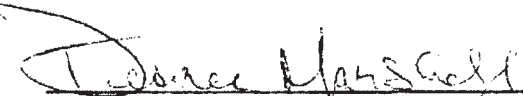
STATE OF NEW YORK)
 : ss.:
COUNTY OF NEW YORK)

November 28, A.D. 1988.

Before me personally appeared the above-named STANLEY BURG and acknowledged the foregoing instrument to be his voluntary act and deed.

On this day personally appeared before me STANLEY BURG to me known to be the individual described in and who executed the within and foregoing instrument, and acknowledged that he signed the same as his free and voluntary act and deed, for the uses and purposes therein mentioned.

Given under my hand and official seal this 28th day of November, 1988.



DESIREE MARSHALL
Notary Public, State of New York
No. 24-4885294
Qualified in Kings County
Certificate Filed in New York County
Commission Expires February 17, 1989

[CONFORMED COPY]

NORTHWEST NATURAL GAS COMPANY

TO

BANKERS TRUST COMPANY

AND

STANLEY BURG (SUCCESSOR TO R. G. PAGE AND J. C. KENNEDY),

As Trustees under the Mortgage and
Deed of Trust, dated as of July 1,
1946, of Portland Gas & Coke Company
(now Northwest Natural Gas Company)

SEVENTEENTH SUPPLEMENTAL INDENTURE

providing among other things for
First Mortgage Bonds, 9 1/8% Series due 2019

Dated as of October 1, 1989

SEVENTEENTH SUPPLEMENTAL INDENTURE

INDENTURE, dated as of the 1st day of October, 1989, made and entered into by and between NORTHWEST NATURAL GAS COMPANY (formerly Portland Gas & Coke Company), a corporation of the State of Oregon, whose post office address is One Pacific Square, 220 N.W. Second Avenue, Portland, Oregon 97209 (hereinafter sometimes called the Company), party of the first part, and BANKERS TRUST COMPANY, a corporation of the State of New York, whose post office address is Four Albany Street, New York, New York 10015 (hereinafter sometimes called the Corporate Trustee) and STANLEY BURG (successor to R. G. PAGE and J. C. KENNEDY), whose post office address is c/o Bankers Trust Company, Four Albany Street, New York, New York 10015 (hereinafter sometimes called the Co-Trustee), parties of the second part (the Corporate Trustee and the Co-Trustee being hereinafter together sometimes called the Trustees), as Trustees under the Mortgage and Deed of Trust, dated as of July 1, 1946 (hereinafter called the Mortgage), executed and delivered by Portland Gas & Coke Company (now Northwest Natural Gas Company) to secure the payment of bonds issued or to be issued under and in accordance with the provisions of the Mortgage, this indenture (hereinafter called Seventeenth Supplemental Indenture) being supplemental thereto;

WHEREAS the Mortgage was or is to be recorded in the official records of various counties in the States of Oregon and Washington which counties include or will include all counties in which this Seventeenth Supplemental Indenture is to be recorded; and

WHEREAS by the Mortgage the Company covenanted that it would execute and deliver such supplemental indenture or indentures and such further instruments and do such further acts as might be necessary or proper to carry out more effectually the purposes of the Mortgage and to make subject to the lien of the Mortgage any property thereafter acquired, made or constructed and intended to be subject to the lien thereof; and

WHEREAS the Company executed and delivered to the Trustees its First Supplemental Indenture, dated as of June 1, 1949 (hereinafter called its First Supplemental Indenture), its Second Supplemental Indenture, dated as of March 1, 1954 (hereinafter called its Second Supplemental Indenture), its Third Supplemental Indenture, dated as of April 1, 1956 (hereinafter called its Third Supplemental Indenture), its Fourth Supplemental Indenture, dated as of

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February 1, 1959 (hereinafter called its Fourth Supplemental Indenture), its Fifth Supplemental Indenture, dated as of July 1, 1961 (hereinafter called its Fifth Supplemental Indenture), its Sixth Supplemental Indenture, dated as of January 1, 1964 (hereinafter called its Sixth Supplemental Indenture), its Seventh Supplemental Indenture, dated as of March 1, 1966 (hereinafter called its Seventh Supplemental Indenture), its Eighth Supplemental Indenture, dated as of December 1, 1969 (hereinafter called its Eighth Supplemental Indenture), its Ninth Supplemental Indenture, dated as of April 1, 1971 (hereinafter called its Ninth Supplemental Indenture), its Tenth Supplemental Indenture, dated as of January 1, 1975 (hereinafter called its Tenth Supplemental Indenture), its Eleventh Supplemental Indenture, dated as of December 1, 1975 (hereinafter called its Eleventh Supplemental Indenture), its Twelfth Supplemental Indenture, dated as of July 1, 1981 (hereinafter called its Twelfth Supplemental Indenture), its Thirteenth Supplemental Indenture, dated as of June 1, 1985 (hereinafter called its Thirteenth Supplemental Indenture), its Fourteenth Supplemental Indenture, dated as of November 1, 1985 (hereinafter called its Fourteenth Supplemental Indenture), and its Fifteenth Supplemental Indenture, dated as of July 1, 1986 (hereinafter called its Fifteenth Supplemental Indenture); and

WHEREAS said First through Fifteenth Supplemental Indentures were filed for record, and were recorded and indexed, as a mortgage of both real and personal property, in the official records of various counties in the States of Oregon and Washington which counties include or will include all counties in which this Seventeenth Supplemental Indenture is to be recorded; and

WHEREAS the Company executed and delivered to the Trustees its Sixteenth Supplemental Indenture, dated as of November 1, 1988 (hereinafter called its Sixteenth Supplemental Indenture); and

WHEREAS said Sixteenth Supplemental Indenture was filed for record, and was recorded and indexed, as a mortgage of both real and personal property, and financing statements were filed, in the official records of the several counties and other offices in the States of Oregon and Washington listed below, as follows:

OREGON

Real Property Mortgage Records

<u>County</u>	<u>Date Recorded</u>	<u>Book, Film or Reel</u>	<u>Page</u>
Benton	December 1, 1988	M-106910-88	-
Clackamas	December 1, 1988	88 50344	-
Clatsop	December 1, 1988	707	470
Columbia	December 1, 1988	88-6204	-
Coos	December 2, 1988	88-12-0109	-
Douglas	December 2, 1988	1042	119
Hood River	December 2, 1988	882808	-
Lane	December 1, 1988	1546R (8850420)	-
Lincoln	December 1, 1988	199	0823
Linn	December 1, 1988	487	472
Marion	December 2, 1988	659	370
Multnomah	December 2, 1988	2160	667
Polk	December 1, 1988	218	448
Tillamook	December 1, 1988	318	943
Wasco	December 1, 1988	883474	-
Washington	December 2, 1988	88-53799	-
Yamhill	December 1, 1988	F228PO068	-

Filed as a Financing Statement

<u>Office</u>	<u>Date Filed for Record</u>	<u>File No.</u>
Secretary of State	December 2, 1988	N 01045

WASHINGTON

Real Property Mortgage Records

<u>County</u>	<u>Date Recorded</u>	<u>Book, Film or Reel</u>	<u>Page</u>
Clark	December 2, 1988	8812020080	-
Klickitat	December 1, 1988	250	294
Skamania	December 2, 1988	112	95

Filed as a Financing Statement

<u>Office</u>	<u>Date Filed for Record</u>	<u>File Number</u>
Secretary of State	December 2, 1988	88-337-0063

; and

WHEREAS an instrument dated as of June 14, 1951, was executed by the Company appointing J. C. Kennedy as Co-Trustee in succession to said R. G. Page (resigned) under the Mortgage and by J. C. Kennedy accepting the appointment as Co-Trustee under the Mortgage in succession to the said R. G. Page, which instrument was recorded in various counties in the States of Oregon and Washington; and

WHEREAS, in the Ninth Supplemental Indenture STANLEY BURG was appointed by the Company as Co-Trustee under the Mortgage in succession to said J. C. KENNEDY (resigned) and in the Ninth Supplemental Indenture Stanley Burg accepted such appointment as Co-Trustee under the Mortgage in succession to said J. C. Kennedy; and

WHEREAS in addition to the property described in the Mortgage, as heretofore supplemented, the Company has acquired certain other property, rights and interests in property; and

WHEREAS, the Company has heretofore issued, in accordance with the provisions of the Mortgage, as supplemented, the following series of First Mortgage Bonds:

<u>Series</u>	<u>Principal Amount Outstanding</u>
4-3/4% Series due 1989.....	None
5-3/4% Series due 1991.....	\$ 9,518,000
9-3/8% Series due 1974.....	None
8-5/8% Series due 1996.....	\$11,739,000
12 % Series due 1984.....	None
10-1/2% Series due 1986.....	None
14-3/4% Series due 1989.....	None
10-1/8% Series due 1995.....	\$15,000,000
10.35% Series due November 1, 1997.....	\$15,000,000
9-3/8% Series due 2011.....	\$48,000,000
9.80% Series due 2018.....	\$24,989,000

; and

WHEREAS Section 8 of the Mortgage provides that the form of each series of bonds (other than the First

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Series) issued thereunder shall be established by Resolution of the Board of Directors of the Company; that the form of such series, as established by said Board of Directors, shall specify the descriptive title of the bonds and various other terms thereof; and that such Series may also contain such provisions not inconsistent with the provisions of the Mortgage as the Board of Directors may, in its discretion, cause to be inserted therein expressing or referring to the terms and conditions upon which such bonds are to be issued and/or secured under the Mortgage; and

WHEREAS Section 120 of the Mortgage provides, among other things, that any power, privilege or right expressly or impliedly reserved to or in any way conferred upon the Company by any provision of the Mortgage, whether such power, privilege or right is in any way restricted or is unrestricted, may (to the extent permitted by law) be in whole or in part waived or surrendered or subjected to any restriction if at the time unrestricted or to additional restriction if already restricted, and the Company may enter into any further covenants, limitations or restrictions for the benefit of any one or more series of bonds issued thereunder, or the Company may cure any ambiguity contained therein or in any supplemental indenture or may (in lieu of establishment by Resolution as provided in Section 8 of the Mortgage) establish the terms and provisions of any series of bonds other than said First Series, by an instrument in writing executed and acknowledged by the Company in such manner as would be necessary to entitle a conveyance of real estate to record in all of the states in which any property at the time subject to the lien of the Mortgage shall be situated; and

WHEREAS the Company now desires to create a new series of bonds and (pursuant to the provisions of Section 120 of the Mortgage) to add to its covenants and agreements contained in the Mortgage, as heretofore supplemented, certain other covenants and agreements to be observed by it and to alter and amend in certain respects the covenants and provisions contained in the Mortgage, as heretofore supplemented and amended; and

WHEREAS the execution and delivery by the Company of this Seventeenth Supplemental Indenture, and the terms of the bonds of the Eighteenth Series hereinafter referred to, have been duly authorized by the Board of Directors of the Company by appropriate resolutions of said Board of Directors;

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NOW, THEREFORE, THIS INDENTURE WITNESSETH:

That Northwest Natural Gas Company, in consideration of the premises and of One Dollar to it duly paid by the Trustees at or before the ensembling and delivery of these presents, the receipt whereof is hereby acknowledged, and in further assurance of the estate, title and rights of the Trustees, and in order further to secure the payment both of the principal of and interest and premium, if any, on the bonds from time to time issued under the Mortgage, according to their tenor and effect, and the performance of all the provisions of the Mortgage (including any instruments supplemental thereto and any modification made as in the Mortgage provided) and of said bonds, hereby grants, bargains, sells, releases, conveys, assigns, transfers, mortgages, pledges, sets over and confirms (subject, however, to Excepted Encumbrances, as defined in Section 6 of the Mortgage) unto Stanley Burg and (to the extent of its legal capacity to hold the same for the purposes hereof) to Bankers Trust Company, as Trustees under the Mortgage, and to their successor or successors in said trust, and to said Trustees and their successors and assigns forever, all property, real, personal and mixed, acquired by the Company after the date of the Mortgage, of the kind or nature specifically mentioned in Article XXI of the Mortgage or of any other kind or nature (except any herein or in the Mortgage expressly excepted) now owned or, subject to the provisions of subsection (I) of Section 87 of the Mortgage, hereafter acquired by the Company (by purchase, consolidation, merger, donation, construction, erection or in any other way) and wheresoever situated, including (without in anywise limiting or impairing by the enumeration of the same the scope and intent of the foregoing) all lands, gas plants, by-product plants, gas holders, gas mains and pipes; all power sites, water rights, reservoirs, canals, raceways, dams, aqueducts, and all other rights or means for appropriating, conveying, storing and supplying water; all rights of way and roads; all plants for the generation of electricity by steam, water and/or other power; all power houses, street lighting systems, standards and other equipment incidental thereto, telephone, radio, television and air-conditioning systems and equipment incidental thereto, water works, water systems, steam heat and hot water plants, substations, lines, service and supply systems, bridges, culverts, tracts, ice or refrigeration plants and equipment, offices, buildings and other structures and the equipment thereof; all machinery, engines, boilers, dynamos, gas, electric and other machines, regulators, meters, transformers, generators, motors, gas, electrical and mechanical appliances, conduits, cables, gas, water, steam heat

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or other pipes, service pipes, fittings, valves and connections, pole and transmission lines, wires, cables, tools, implements, apparatus, furniture and chattels; all franchises, consents or permits; all lines for the transmission and distribution of gas, electric current, steam heat or water for any purpose including mains, pipes, conduits, towers, poles, wires, cables, ducts and all apparatus for use in connection therewith; all real estate, lands, easements, servitudes, licenses, permits, franchises, privileges, rights of way and other rights in or relating to public or private property, real or personal, or the occupancy of such property and (except as herein or in the Mortgage, as heretofore supplemented, expressly excepted) all right, title and interest the Company may now have or may hereafter acquire in and to any and all property of any kind or nature wheresoever situated.

TOGETHER WITH all and singular the tenements, hereditaments, prescriptions, servitudes and appurtenances belonging or in anywise appertaining to the aforementioned property or any part thereof, with the reversion and reversions, remainder and remainders and (subject to the provisions of Section 57 of the Mortgage) the tolls, rents, revenues, issues, earnings, income, product and profits thereof, and all the estate, right, title and interest and claim whatsoever, at law as well as in equity, which the Company now has or may hereafter acquire in and to the aforementioned property and franchises and every part and parcel thereof.

IT IS HEREBY AGREED by the Company that, subject to the provisions of subsection (I) of Section 87 of the Mortgage, all the property, rights, and franchises acquired by the Company (by purchase, consolidation, merger, donation, construction, erection or in any other way) after the date hereof, except any herein or in the Mortgage, as heretofore supplemented, expressly excepted, shall be and are as fully granted and conveyed hereby and by the Mortgage, and as fully embraced within the lien hereof and the lien of the Mortgage, as supplemented, as if such property, rights and franchises were now owned by the Company and were specifically described herein or in the Mortgage, as heretofore supplemented, and conveyed hereby or thereby. Provided that the following are not and are not intended to be now or hereafter granted, bargained, sold, released, conveyed, assigned, transferred, mortgaged, pledged, set over or confirmed hereunder and are hereby expressly excepted from the lien and operation of this Seventeenth Supplemental Indenture and from the lien and operation of the Mortgage, as heretofore supplemented, viz: (1) cash, shares of stock, bonds, notes and

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other obligations and other securities not hereafter specifically pledged, paid, deposited, delivered or held under the Mortgage, as heretofore supplemented, or covenanted so to be; (2) merchandise, equipment, apparatus, materials or supplies held for the purpose of sale or other disposition in the usual course of business; fuel, oil and similar materials and supplies consumable in the operation of any of the properties of the Company; all aircraft, tractors, rolling stock, trolley coaches, buses, motor coaches, automobiles, motor trucks, and other vehicles and materials and supplies held for the purpose of repairing or replacing (in whole or in part) any of the same; (3) bills, notes and accounts receivable, judgments, demands and choses in action, and all contracts, leases and operating agreements not specifically pledged under the Mortgage, as heretofore supplemented, or covenanted so to be; (4) the last day of the term of any lease or leasehold which may be or become subject to the lien of the Mortgage; (5) gas, petroleum, carbon, chemicals, light oils, tar products, electric energy, steam, water, ice, and other materials or products, manufactured, stored, generated, produced, purchased or acquired by the Company for sale, distribution or use in the ordinary course of its business; all timber, minerals, mineral rights and royalties and all Natural Gas and Oil Production Property, as defined in Section 4 of the Mortgage; and (6) the Company's franchise to be a corporation; provided, however, that the property and rights expressly excepted from the lien and operation of this Seventeenth Supplemental Indenture and from the lien and operation of the Mortgage, as heretofore supplemented, in the above subdivisions (2) and (3) shall (to the extent permitted by law) cease to be so excepted in the event and as of the date that either or both of the Trustees or a receiver or trustee shall enter upon and take possession of the Mortgaged and Pledged Property in the manner provided in Article XIII of the Mortgage by reason of the occurrence of a Default as defined in Section 65 thereof.

TO HAVE AND TO HOLD all such properties, real, personal and mixed, granted, bargained, sold, released, conveyed, assigned, transferred, mortgaged, pledged, set over or confirmed by the Company as aforesaid, or intended so to be, unto Stanley Burg and (to the extent of its legal capacity to hold the same for the purposes hereof) to Bankers Trust Company, as Trustees, and their successors and assigns forever.

IN TRUST NEVERTHELESS, for the same purposes and upon the same terms, trusts and conditions and subject to and with the same provisos and covenants as are set forth

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in the Mortgage, as heretofore supplemented, this Seventeenth Supplemental Indenture being supplemental thereto.

AND IT IS HEREBY COVENANTED by the Company that all the terms, conditions, provisos, covenants and provisions contained in the Mortgage, as heretofore supplemented, shall affect and apply to the property hereinbefore described and conveyed, and to the estates, rights, obligations and duties of the Company and the Trustees and the beneficiaries of the trust with respect to said property, and to the Trustees and their successors in the trust, in the same manner and with the same effect as if the said property had been owned by the Company at the time of the execution of the Mortgage, and had been specifically and at length described in and conveyed to said Trustees by the Mortgage as a part of the property therein stated to be conveyed.

The Company further covenants and agrees to and with the Trustees and their successors in said trust under the Mortgage, as follows:

ARTICLE I.

Eighteenth Series of Bonds.

SECTION 1.01. There shall be a series of bonds designated "9 1/8% Series due 2019" (herein sometimes referred to as the "Eighteenth Series"), each of which shall also bear the descriptive title First Mortgage Bond, and the form thereof, which shall be established by Resolution of the Board of Directors of the Company, shall contain suitable provisions with respect to the matters herein-after in this Article I and in Article II specified. Bonds of the Eighteenth Series shall be limited to \$25,000,000, in aggregate principal amount at any one time Outstanding except as provided in Section 16 of the Mortgage and shall mature on October 1, 2019, and shall be issued as fully registered bonds in denominations of One Thousand Dollars and, at the option of the Company, in any multiple or multiples of One Thousand Dollars (the exercise of such option to be evidenced by the execution and delivery thereof). Bonds of the Eighteenth Series shall bear interest at the rate of 9 1/8% per annum, payable semi-annually on April 1 and October 1 of each year; and the principal of, and premium, if any, and interest on each said bond shall be payable at the office or agency of the Company in the Borough of Manhattan, The City of New York, in such coin or currency of the United States of America as at the time of payment is legal tender for

public and private debts. Bonds of the Eighteenth Series shall be dated as in Section 10 of the Mortgage provided.

(I) Bonds of the Eighteenth Series shall be redeemable either at the option of the Company or pursuant to the requirements of the Mortgage in whole at any time, or in part from time to time, prior to maturity, upon notice, as provided in Section 52 of the Mortgage, mailed at least thirty (30) days prior to the date fixed for redemption, at the following general redemption prices, expressed in percentages of the principal amount of the bonds to be redeemed:

GENERAL REDEMPTION PRICES

If redeemed during the 12 months period ending September 30,

1990.....108.43%	2000.....104.22%	2010..... 100.00%
1991.....108.01%	2001.....103.80%	2011..... 100.00%
1992.....107.59%	2002.....103.37%	2012..... 100.00%
1993.....107.17%	2003.....102.95%	2013..... 100.00%
1994.....106.74%	2004.....102.53%	2014..... 100.00%
1995.....106.32%	2005.....102.11%	2015..... 100.00%
1996.....105.90%	2006.....101.69%	2016..... 100.00%
1997.....105.48%	2007.....101.27%	2017..... 100.00%
1998.....105.06%	2008.....100.85%	2018..... 100.00%
1999.....104.64%	2009.....100.43%	2019..... 100.00%

in each case, together with accrued interest to the date fixed for redemption; provided, however, that no bonds of the Eighteenth Series may be redeemed at said general redemption prices prior to October 1, 1996, as part of any refunding operation involving, directly or indirectly, the incurring of indebtedness by the Company having a cost (calculated in accordance with acceptable financial practice) lower than 9.24% per annum.

(II) Bonds of the Eighteenth Series shall also be redeemable in whole at any time, or in part from time to time, prior to maturity, upon like notice, by the application (either at the option of the Company or pursuant to the requirements of the Mortgage) of cash deposited with the Corporate Trustee pursuant to the provisions of Section 64 of the Mortgage (so long as any bonds of the Seventh, Eighth or Tenth Series remain Outstanding), or of Section 2 hereof, or with the Proceeds of Released Property; provided, however, that in the case of application of cash deposited with the Corporate Trustee pursuant to the provisions of Section 2 hereof, if the date fixed for such redemption shall be prior to January 1 of the calen-

dar year in which such deposit of cash shall become due under the provisions of Section 2 hereof, they shall be redeemable at the general redemption prices set forth in subdivision (I) of this Section, together with accrued interest to the date fixed for redemption; and provided further, that

(1) in the case of application of cash deposited with the Corporate Trustee pursuant to the provisions of Section 2 hereof if the date fixed for such redemption shall be on or after January 1 of the calendar year in which such deposit of cash shall become due in accordance with the Total Special Redemption Fund Requirement for said calendar year, or

(2) in the case of redemption by the application of cash deposited with the Corporate Trustee pursuant to the provisions of Section 64 of the Mortgage or with the Proceeds of Released Property,

they shall be redeemable at the following special redemption prices, expressed in percentages of the principal amount of the bonds to be redeemed:

SPECIAL REDEMPTION PRICES

If redeemed during the 12 months period ending September 30,

1990.....100.00%	2000.....100.00%	2010.....100.00%
1991.....100.00%	2001.....100.00%	2011.....100.00%
1992.....100.00%	2002.....100.00%	2012.....100.00%
1993.....100.00%	2003.....100.00%	2013.....100.00%
1994.....100.00%	2004.....100.00%	2014.....100.00%
1995.....100.00%	2005.....100.00%	2015.....100.00%
1996.....100.00%	2006.....100.00%	2016.....100.00%
1997.....100.00%	2007.....100.00%	2017.....100.00%
1998.....100.00%	2008.....100.00%	2018.....100.00%
1999.....100.00%	2009.....100.00%	2019.....100.00%

in each case, together with accrued interest to the date fixed for redemption.

(III) At the option of the registered owner, any bonds of the Eighteenth Series, upon surrender thereof, for cancellation, at the office or agency of the Company in the Borough of Manhattan, The City of New York, shall (subject to the provisions of Section 12 of the Mortgage) be exchangeable for a like aggregate principal amount of

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bonds of the same series of other authorized denominations.

Transfers of bonds of the Eighteenth Series may be registered (subject to the provisions of Section 12 of the Mortgage) at the office or agency of the Company in the Borough of Manhattan, The City of New York.

Upon any registration of transfer or exchange of bonds of the Eighteenth Series, the Company may make a charge therefor sufficient to reimburse it for any tax or taxes or other governmental charge, as provided in Section 12 of the Mortgage, but the Company hereby waives any right to make a charge in addition thereto for any registration of exchange or transfer of bonds of the Eighteenth Series.

ARTICLE II.

Special Redemption Fund for Bonds of the Eighteenth Series

Section 2. The Company covenants that, unless all bonds of the Eighteenth Series shall have ceased to be Outstanding, it will, as a Special Redemption Fund for the retirement of bonds of the Eighteenth Series, deliver to the Corporate Trustee an amount in cash and/or principal amount of bonds of the Eighteenth Series, on October 1 of each year, beginning with the year 1995, to and including the year 2018, equal to the Total Special Redemption Fund Requirement for said calendar year. The term "Total Special Redemption Fund Requirement" shall mean for any calendar year \$1,000,000 in cash and/or principal amount of bonds of the Eighteenth Series (herein called the "Mandatory Special Redemption Fund Requirement") plus the Optional Special Redemption Fund Payment, if any, for such calendar year. The term "Optional Special Redemption Fund Payment" shall mean, for any calendar year, any amount, not in excess of \$1,000,000 in cash and/or principal amount of bonds of the Eighteenth Series, that the Company elects to add to the Special Redemption Fund for such calendar year. At the option of the Company, Optional Special Redemption Fund Payments may (at any time after they are made) be applied (to the extent not theretofore so applied) in whole or in part from time to time, to reduce Mandatory Special Redemption Fund Requirements for subsequent years upon written notice to the Corporate Trustee.

The Company, at its option (as evidenced by a written order of any Vice President, its Treasurer or an

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Assistant Treasurer delivered to the Corporate Trustee directing such credit), shall be credited against any of the requirements of this Section with the aggregate principal amount of any bond(s) of the Eighteenth Series (a) which are not then being and have not theretofore been delivered to meet the requirements of this Section, (b) which have been purchased or redeemed and cancelled or for the purchase or redemption of which moneys in the necessary amount shall be held by the Corporate Trustee with irrevocable direction so to apply the same (provided that any such purchase or redemption shall have been, or is to be, effected otherwise than with cash deposited under the provisions of Section 64 of the Mortgage or with cash which, after giving effect to the provisions of Section 61 of the Mortgage, is then deemed to be or to have been Funded Cash, and, in the case of redemption, the notice required therefor shall have been given or have been provided for to the satisfaction of the Corporate Trustee) and (c) which have not theretofore been made the basis under any of the provisions of the Mortgage for the authentication and delivery of bonds, the withdrawal of cash or the release of property or the basis of a credit under the provisions of this Section (subject to the provisions of Sections 59 and 61 of the Mortgage, permitting the revocation of the waiver of the right to the authentication and delivery of bonds).

Except as hereinafter specifically prohibited by this paragraph, and notwithstanding any other provisions of this Seventeenth Supplemental Indenture, (i) the Company shall be permitted from time to time to anticipate in whole or in part the Total Special Redemption Fund Requirement becoming due on October 1 of the then current year or the Mandatory Special Redemption Fund Requirement becoming due on October 1 of any subsequent year or years, by depositing cash and/or a principal amount of bonds of the Eighteenth Series with the Corporate Trustee in full satisfaction or in partial satisfaction of the requirements of this Section, and (ii) any cash deposited under this Section, whether in full satisfaction or in partial satisfaction of the requirements of this Section and whether becoming due on October 1 of the then current year or of a subsequent year, shall be applied by the Corporate Trustee from time to time, as the Company may request, to the purchase of bonds of the Eighteenth Series, at public or private sale; provided, however, that the Corporate Trustee, before making any purchases of bonds as so provided shall by mail notify all registered owners of bonds of the Eighteenth Series of the amount of cash to be applied to the purchase of such bonds and request tenders of bonds by a specified date, and on or after such date

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the Corporate Trustee, to the extent, as nearly as is possible, of the cash so to be applied, shall purchase the bonds so tendered at the price or prices (including accrued interest and brokerage, if any) most favorable to the Company but not exceeding the cost of redeeming such bonds on a date forty (40) days after the date of such purchase (including premium, if any, and accrued interest from the interest date next preceding the date of purchase to such redemption date in such cost), and, if more bonds are offered at any specified price than there is cash then available to purchase the same, the Corporate Trustee shall prorate its purchases of bonds at such price as nearly as may be practicable between the owners of bonds offered at such price in proportion to the principal amounts of bonds of the Eighteenth Series registered in the names of the owners offering bonds at such price, or to the redemption of bonds of the Eighteenth Series; provided, however, that if moneys in excess of the sum of Fifty Thousand Dollars (\$50,000) deposited with the Corporate Trustee pursuant to this Section (except moneys which theretofore have been set aside to be applied to the purchase of bonds so tendered or to the redemption of bonds called for redemption) shall have remained on deposit for a period of six calendar months, such moneys so remaining on deposit shall promptly thereafter be applied by the Corporate Trustee to the redemption of bonds of the Eighteenth Series; and provided further that, unless consented to by the holders of a majority in principal amount of bonds of the Eighteenth Series Outstanding at the time of such consent, the Company may not deposit cash prior to October 1, 1996 in anticipation of the requirements of this Section, if the cash so deposited represents a part of a refunding operation involving, directly or indirectly, the incurring of indebtedness by the Company having a cost (calculated in accordance with acceptable financial practice) lower than 9.24% per annum.

Any cash deposited under the provisions of this Section shall not be deemed to be Funded Cash; any bonds of the Eighteenth Series delivered to the Corporate Trustee pursuant to the provisions of this Section shall not be deemed to have been retired by the use of Funded Cash; and with respect to all credits taken under this Section on the basis of the purchase or redemption of bonds of the Eighteenth Series, it shall not be deemed that a credit has been taken under the Mortgage on the basis thereof.

Any bonds issued under the Mortgage, delivered to, deposited with or purchased or redeemed by, the Cor-

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porate Trustee pursuant to the provisions of this Section, shall forthwith be cancelled by the Corporate Trustee.

The Company shall forthwith from time to time on demand of the Corporate Trustee make further payments pursuant to the provisions of this Section on account of accrued interest, brokerage and premium, if any, on bonds of the Eighteenth Series purchased or redeemed or then to be purchased or redeemed but not in excess of

(AA) the aggregate cost for principal, interest, brokerage and premium, if any, on all bonds theretofore, or then to be, purchased and/or redeemed pursuant to the provisions of this Section

after deducting therefrom

(BB) the aggregate principal amount of all bonds theretofore, and of all bonds then to be, purchased and/or redeemed pursuant to the provisions of this Section plus the aggregate of all such further payments theretofore made pursuant to the provisions of this Section on account of accrued interest, brokerage and/or premium, if any.

ARTICLE III.

Miscellaneous Provisions.

SECTION 3.01. Subject to the amendments provided for in this Seventeenth Supplemental Indenture, the terms defined in the Mortgage, as heretofore supplemented, shall, for all purposes of this Seventeenth Supplemental Indenture, have the meanings specified in the Mortgage, as heretofore supplemented.

SECTION 3.02. The Trustees hereby accept the trusts hereby declared, provided, created or supplemented, and agree to perform the same upon the terms and conditions herein and in the Mortgage, as heretofore supplemented, set forth, including the following:

The Trustees shall not be responsible in any manner whatsoever for or in respect of the validity or sufficiency of this Seventeenth Supplemental Indenture or for or in respect of the recitals contained herein, all of which recitals are made by the Company solely. In general each and every term and condition contained in Article XVII of the Mortgage shall apply to and form part of this Seventeenth Supplemental Indenture with the same force and

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effect as if the same were herein set forth in full, with such omissions, variations and insertions, if any, as may be appropriate to make the same conform to the provisions of the Seventeenth Supplemental Indenture.

SECTION 3.03. Whenever in this Seventeenth Supplemental Indenture any of the parties hereto is named or referred to, this shall, subject to the provisions of Articles XVI and XVII of the Mortgage, be deemed to include the successors or assigns of such party, and all the covenants and agreements in this Seventeenth Supplemental Indenture contained by or on behalf of the Company or by or on behalf of the Trustees shall bind and inure to the benefit of the respective successors and assigns of such parties whether so expressed or not.

SECTION 3.04. Nothing in this Seventeenth Supplemental Indenture, expressed or implied, is intended, or shall be construed, to confer upon, or to give to, any person, firm or corporation, other than the parties hereto and the holders of the bonds and coupons outstanding under the Mortgage, any right, remedy, or claim under or by reason of this Seventeenth Supplemental Indenture or any covenant, condition, stipulation, promise or agreement hereof, and all the covenants, conditions, stipulations, promises and agreements by or on behalf of the Company as set forth in this Seventeenth Supplemental Indenture shall be for the sole and exclusive benefit of the parties hereto, and of the holders of the bonds and of the coupons outstanding under the Mortgage.

SECTION 3.05. This Seventeenth Supplemental Indenture has been executed in several identical counterparts, each of which shall be an original and all of which shall constitute but one and the same instrument.

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IN WITNESS WHEREOF, Northwest Natural Gas Company, party hereto of the first part, has caused its corporate name to be hereunto affixed, and this instrument to be signed and sealed by its President or one of its Vice Presidents, and its corporate seal to be attested by its Secretary or one of its Assistant Secretaries for and in its behalf on the 19th day of October, 1989, as of October 1, 1989, in Portland, Oregon; Bankers Trust Company, one of the parties hereto of the second part, has caused its corporate name to be hereunto affixed, and this instrument to be signed and sealed by one of its Vice Presidents or one of its Assistant Vice Presidents and its corporate seal to be attested by one of its Assistant Secretaries; and Stanley Burg, one of the parties hereto of the second part, has hereunto set his hand and affixed his seal, all in The City of New York, on the 23rd day of October, 1989, as of October 1, 1989.

NORTHWEST NATURAL GAS COMPANY

[CORPORATE SEAL]

By Bruce R. DeBolt
Senior Vice President,
Finance and Administration

Attest:

C.J. Rue
Secretary

Executed, sealed and delivered by
NORTHWEST NATURAL GAS COMPANY in
the presence of:

Lou-Wayne Steiger

Leslie K. Alldrin

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BANKERS TRUST COMPANY, as Trustee,

[CORPORATE SEAL]

By Barbara A. Joiner
Vice President

Attest:

Y. Petras Blue
Assistant Secretary

Stanley Burg
STANLEY BURG, as Trustee

Executed, sealed and
delivered by BANKERS TRUST
COMPANY and STANLEY BURG
in the presence of:

Todd A. Gasper

Eric M. Hawner

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STATE OF NEW YORK)
 : SS.:
COUNTY OF NEW YORK)

October 23, A.D. 1989.

Before me personally appeared BARBARA A. JOINER, who, being duly sworn, did say that she is a Vice President of BANKERS TRUST COMPANY and that the seal affixed to the foregoing instrument is the corporate seal of said Corporation and that said instrument was signed and sealed in behalf of said Corporation by authority of its Board of Directors; and she acknowledged said instrument to be its voluntary act and deed.

On this 23rd day of October, 1989, before me personally appeared BARBARA A. JOINER, to me known to be a Vice President of BANKERS TRUST COMPANY, one of the corporations that executed the within and foregoing instrument, and acknowledged said instrument to be the free and voluntary act and deed of said Corporation, for the uses and purposes therein mentioned, and on oath stated that she was authorized to execute said instrument and that the seal affixed is the corporate seal of said Corporation.

IN WITNESS WHEREOF I have hereunto set my hand and affixed my official seal the day and year first above written.

[NOTARIAL SEAL]

Barbara A. Sheridan
BARBARA A. SHERIDAN
Notary Public, State of New York
No. 03-4802445
Qualified in Bronx County
Certificate Filed in New York County
Commission Expires February 28, 1991

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STATE OF NEW YORK)
 : ss.:
COUNTY OF NEW YORK)

October 23, A.D. 1989.

Before me personally appeared the above-named STANLEY BURG and acknowledged the foregoing instrument to be his voluntary act and deed.

On this day personally appeared before me STANLEY BURG to me known to be the individual described in and who executed the within and foregoing instrument, and acknowledged that he signed the same as his free and voluntary act and deed, for the uses and purposes therein mentioned.

Given under my hand and official seal this 23rd day of October, 1989.

[NOTARIAL SEAL]

Barbara A. Sheridan
BARBARA A. SHERIDAN
Notary Public, State of New York
No. 03-4802445
Qualified in Bronx County
Certificate Filed in New York County
Commission Expires February 28, 1991

SUMMARY OF RECORDING DATA
IN THE STATE OF OREGON

Real Property Mortgage Records

<u>Counterpart No.</u>	<u>County</u>	<u>Date Recorded</u>	<u>Book, Film or Reel</u>	<u>Page</u>
12	Benton	October 27, 1989	M-116844-89	-
13	Clackamas	October 30, 1989	89 48562	-
14	Clatsop	October 30, 1989	726	580
15	Columbia	October 27, 1989	89-6310	-
16	Coos	October 31, 1989	89-10-1993	-
17	Douglas	October 27, 1989	1079	129
18	Hood River	October 30, 1989	892994	-
19	Lane	October 27, 1989	8948696	-
20	Lincoln	October 27, 1989	210	0933
21	Linn	October 27, 1989	514	812
22	Marion	October 27, 1989	726	415
23	Multnomah	October 30, 1989	2248	1890
24	Polk	October 27, 1989	227	957
25	Tillamook	October 30, 1989	324	615
26	Wasco	October 27, 1989	893143	-
27	Washington	October 30, 1989	89-52457	-
28	Yamhill	October 31, 1989	F237P1391	-

Filed as a Financing Statement

<u>Counterpart No.</u>	<u>Office</u>	<u>Date Filed for Record</u>	<u>File No.</u>
10	Secretary of State	October 27, 1989	N 59689

IN THE STATE OF WASHINGTON
 Real Property Mortgage Records

<u>Counterpart No.</u>	<u>County</u>	<u>Date Recorded</u>	<u>Book, Film or Reel</u>	<u>Page</u>
30	Clark	October 27, 1989	399	1
31	Klickitat	October 27, 1989	258	214
32	Skamania	October 30, 1989	116	503

Filed as a Financing Statement

<u>Counterpart No.</u>	<u>Office</u>	<u>Date Filed for Record</u>	<u>File No.</u>
29	Secretary of State	October 30, 1989	89-303-0651

[CONFORMED COPY]

NORTHWEST NATURAL GAS COMPANY

TO

BANKERS TRUST COMPANY

AND

STANLEY BURG (SUCCESSOR TO R. G. PAGE AND J. C. KENNEDY),

As Trustees under the Mortgage and
Deed of Trust, dated as of July 1,
1946, of Portland Gas & Coke Company
(now Northwest Natural Gas Company)

EIGHTEENTH SUPPLEMENTAL INDENTURE

providing among other things for
First Mortgage Bonds, 9 3/4% Series due 2015

Dated as of July 1, 1990

EIGHTEENTH SUPPLEMENTAL INDENTURE

INDENTURE, dated as of the 1st day of July, 1990, made and entered into by and between NORTHWEST NATURAL GAS COMPANY (formerly Portland Gas & Coke Company), a corporation of the State of Oregon, whose post office address is One Pacific Square, 220 N.W. Second Avenue, Portland, Oregon 97209 (hereinafter sometimes called the Company), party of the first part, and BANKERS TRUST COMPANY, a corporation of the State of New York, whose post office address is Four Albany Street, New York, New York 10015 (hereinafter sometimes called the Corporate Trustee) and STANLEY BURG (successor to R. G. PAGE and J. C. KENNEDY), whose post office address is c/o Bankers Trust Company, Four Albany Street, New York, New York 10015 (hereinafter sometimes called the Co-Trustee), parties of the second part (the Corporate Trustee and the Co-Trustee being hereinafter together sometimes called the Trustees), as Trustees under the Mortgage and Deed of Trust, dated as of July 1, 1946 (hereinafter called the Mortgage), executed and delivered by Portland Gas & Coke Company (now Northwest Natural Gas Company) to secure the payment of bonds issued or to be issued under and in accordance with the provisions of the Mortgage, this indenture (hereinafter called Eighteenth Supplemental Indenture) being supplemental thereto;

WHEREAS the Mortgage was or is to be recorded in the official records of various counties in the States of Oregon and Washington which counties include or will include all counties in which this Eighteenth Supplemental Indenture is to be recorded; and

WHEREAS by the Mortgage the Company covenanted that it would execute and deliver such supplemental indenture or indentures and such further instruments and do such further acts as might be necessary or proper to carry out more effectually the purposes of the Mortgage and to make subject to the lien of the Mortgage any property thereafter acquired, made or constructed and intended to be subject to the lien thereof; and

WHEREAS the Company executed and delivered to the Trustees its First Supplemental Indenture, dated as of June 1, 1949 (hereinafter called its First Supplemental Indenture), its Second Supplemental Indenture, dated as of March 1, 1954 (hereinafter called its Second Supplemental Indenture), its Third Supplemental Indenture, dated as of April 1, 1956 (hereinafter called its Third Supplemental Indenture), its Fourth Supplemental Indenture, dated as of

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February 1, 1959 (hereinafter called its Fourth Supplemental Indenture), its Fifth Supplemental Indenture, dated as of July 1, 1961 (hereinafter called its Fifth Supplemental Indenture), its Sixth Supplemental Indenture, dated as of January 1, 1964 (hereinafter called its Sixth Supplemental Indenture), its Seventh Supplemental Indenture, dated as of March 1, 1966 (hereinafter called its Seventh Supplemental Indenture), its Eighth Supplemental Indenture, dated as of December 1, 1969 (hereinafter called its Eighth Supplemental Indenture), its Ninth Supplemental Indenture, dated as of April 1, 1971 (hereinafter called its Ninth Supplemental Indenture), its Tenth Supplemental Indenture, dated as of January 1, 1975 (hereinafter called its Tenth Supplemental Indenture), its Eleventh Supplemental Indenture, dated as of December 1, 1975 (hereinafter called its Eleventh Supplemental Indenture), its Twelfth Supplemental Indenture, dated as of July 1, 1981 (hereinafter called its Twelfth Supplemental Indenture), its Thirteenth Supplemental Indenture, dated as of June 1, 1985 (hereinafter called its Thirteenth Supplemental Indenture), its Fourteenth Supplemental Indenture, dated as of November 1, 1985 (hereinafter called its Fourteenth Supplemental Indenture), its Fifteenth Supplemental Indenture, dated as of July 1, 1986 (hereinafter called its Fifteenth Supplemental Indenture), and its Sixteenth Supplemental Indenture, dated as of November 1, 1988 (hereinafter called its Sixteenth Supplemental Indenture); and

WHEREAS said First through Sixteenth Supplemental Indentures were filed for record, and were recorded and indexed, as a mortgage of both real and personal property, in the official records of various counties in the States of Oregon and Washington which counties include or will include all counties in which this Eighteenth Supplemental Indenture is to be recorded; and

WHEREAS the Company executed and delivered to the Trustees its Seventeenth Supplemental Indenture, dated as of October 1, 1989 (hereinafter called its Seventeenth Supplemental Indenture); and

WHEREAS said Seventeenth Supplemental Indenture was filed for record, and was recorded and indexed, as a mortgage of both real and personal property, and financing statements were filed, in the official records of the several counties and other offices in the States of Oregon and Washington listed below, as follows:

OREGON

Real Property Mortgage Records

<u>County</u>	<u>Date Recorded</u>	<u>Book, Film or Reel</u>	<u>Page</u>
Benton	October 27, 1989	M-116844-89	-
Clackamas	October 30, 1989	89 48562	-
Clatsop	October 30, 1989	726	580
Columbia	October 27, 1989	89-6310	-
Coos	October 31, 1989	89-10-1993	-
Douglas	October 27, 1989	1079	129
Hood River	October 30, 1989	892994	-
Lane	October 27, 1989	8948696	-
Lincoln	October 27, 1989	210	0933
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Marion	October 27, 1989	726	415
Multnomah	October 30, 1989	2248	1890
Polk	October 27, 1989	227	957
Tillamook	October 30, 1989	324	615
Wasco	October 27, 1989	893143	-
Washington	October 30, 1989	89-52457	-
Yamhill	October 31, 1989	F237P1391	-

Filed as a Financing Statement

<u>Office</u>	<u>Date Filed for Record</u>	<u>File No.</u>
Secretary of State	October 27, 1989	N 59689

WASHINGTON

Real Property Mortgage Records

<u>County</u>	<u>Date Recorded</u>	<u>Book, Film or Reel</u>	<u>Page</u>
Clark	October 27, 1989	399	1
Klickitat	October 27, 1989	258	214
Skamania	October 30, 1989	116	503

Filed as a Financing Statement

<u>Office</u>	<u>Date Filed for Record</u>	<u>File Number</u>
Secretary of State	October 30, 1989	89-303-0651

; and

WHEREAS an instrument dated as of June 14, 1951, was executed by the Company appointing J. C. Kennedy as Co-Trustee in succession to said R. G. Page (resigned) under the Mortgage and by J. C. Kennedy accepting the appointment as Co-Trustee under the Mortgage in succession to the said R. G. Page, which instrument was recorded in various counties in the States of Oregon and Washington; and

WHEREAS, in the Ninth Supplemental Indenture STANLEY BURG was appointed by the Company as Co-Trustee under the Mortgage in succession to said J. C. KENNEDY (resigned) and in the Ninth Supplemental Indenture Stanley Burg accepted such appointment as Co-Trustee under the Mortgage in succession to said J. C. Kennedy; and

WHEREAS in addition to the property described in the Mortgage, as heretofore supplemented, the Company has acquired certain other property, rights and interests in property; and

WHEREAS, the Company has heretofore issued, in accordance with the provisions of the Mortgage, as supplemented, the following series of First Mortgage Bonds:

<u>Series</u>	<u>Principal Amount Outstanding</u>
5-3/4% Series due 1991.....	\$ 9,368,000
8-5/8% Series due 1996.....	\$11,668,000
10-1/8% Series due 1995.....	\$15,000,000
10.35% Series due November 1, 1997.....	\$15,000,000
9-3/8% Series due 2011.....	\$48,000,000
9.80% Series due 2018.....	\$24,989,000
9-1/8% Series due 2019.....	\$25,000,000

; and

WHEREAS Section 8 of the Mortgage provides that the form of each series of bonds (other than the First Series) issued thereunder shall be established by Resolution of the Board of Directors of the Company; that the form of such series, as established by said Board of Di-

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rectors, shall specify the descriptive title of the bonds and various other terms thereof; and that such Series may also contain such provisions not inconsistent with the provisions of the Mortgage as the Board of Directors may, in its discretion, cause to be inserted therein expressing or referring to the terms and conditions upon which such bonds are to be issued and/or secured under the Mortgage; and

WHEREAS Section 120 of the Mortgage provides, among other things, that any power, privilege or right expressly or impliedly reserved to or in any way conferred upon the Company by any provision of the Mortgage, whether such power, privilege or right is in any way restricted or is unrestricted, may (to the extent permitted by law) be in whole or in part waived or surrendered or subjected to any restriction if at the time unrestricted or to additional restriction if already restricted, and the Company may enter into any further covenants, limitations or restrictions for the benefit of any one or more series of bonds issued thereunder, or the Company may cure any ambiguity contained therein or in any supplemental indenture or may (in lieu of establishment by Resolution as provided in Section 8 of the Mortgage) establish the terms and provisions of any series of bonds other than said First Series, by an instrument in writing executed and acknowledged by the Company in such manner as would be necessary to entitle a conveyance of real estate to record in all of the states in which any property at the time subject to the lien of the Mortgage shall be situated; and

WHEREAS the Company now desires to create a new series of bonds and (pursuant to the provisions of Section 120 of the Mortgage) to add to its covenants and agreements contained in the Mortgage, as heretofore supplemented, certain other covenants and agreements to be observed by it and to alter and amend in certain respects the covenants and provisions contained in the Mortgage, as heretofore supplemented and amended; and

WHEREAS the execution and delivery by the Company of this Eighteenth Supplemental Indenture, and the terms of the bonds of the Nineteenth Series hereinafter referred to, have been duly authorized by the Board of Directors of the Company by appropriate resolutions of said Board of Directors;

NOW, THEREFORE, THIS INDENTURE WITNESSETH:

That Northwest Natural Gas Company, in consideration of the premises and of One Dollar to it duly paid

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by the Trustees at or before the ensembling and delivery of these presents, the receipt whereof is hereby acknowledged, and in further assurance of the estate, title and rights of the Trustees, and in order further to secure the payment both of the principal of and interest and premium, if any, on the bonds from time to time issued under the Mortgage, according to their tenor and effect, and the performance of all the provisions of the Mortgage (including any instruments supplemental thereto and any modification made as in the Mortgage provided) and of said bonds, hereby grants, bargains, sells, releases, conveys, assigns, transfers, mortgages, pledges, sets over and confirms (subject, however, to Excepted Encumbrances, as defined in Section 6 of the Mortgage) unto Stanley Burg and (to the extent of its legal capacity to hold the same for the purposes hereof) to Bankers Trust Company, as Trustees under the Mortgage, and to their successor or successors in said trust, and to said Trustees and their successors and assigns forever, all property, real, personal and mixed, acquired by the Company after the date of the Mortgage, of the kind or nature specifically mentioned in Article XXI of the Mortgage or of any other kind or nature (except any herein or in the Mortgage expressly excepted) now owned or, subject to the provisions of subsection (I) of Section 87 of the Mortgage, hereafter acquired by the Company (by purchase, consolidation, merger, donation, construction, erection or in any other way) and wheresoever situated, including (without in anywise limiting or impairing by the enumeration of the same the scope and intent of the foregoing) all lands, gas plants, by-product plants, gas holders, gas mains and pipes; all power sites, water rights, reservoirs, canals, raceways, dams, aqueducts, and all other rights or means for appropriating, conveying, storing and supplying water; all rights of way and roads; all plants for the generation of electricity by steam, water and/or other power; all power houses, street lighting systems, standards and other equipment incidental thereto, telephone, radio, television and air-conditioning systems and equipment incidental thereto, water works, water systems, steam heat and hot water plants, substations, lines, service and supply systems, bridges, culverts, tracts, ice or refrigeration plants and equipment, offices, buildings and other structures and the equipment thereof; all machinery, engines, boilers, dynamos, gas, electric and other machines, regulators, meters, transformers, generators, motors, gas, electrical and mechanical appliances, conduits, cables, gas, water, steam heat or other pipes, service pipes, fittings, valves and connections, pole and transmission lines, wires, cables, tools, implements, apparatus, furniture and chattels; all franchises, consents or permits; all lines for the trans-

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mission and distribution of gas, electric current, steam heat or water for any purpose including mains, pipes, conduits, towers, poles, wires, cables, ducts and all apparatus for use in connection therewith; all real estate, lands, easements, servitudes, licenses, permits, franchises, privileges, rights of way and other rights in or relating to public or private property, real or personal, or the occupancy of such property and (except as herein or in the Mortgage, as heretofore supplemented, expressly excepted) all right, title and interest the Company may now have or may hereafter acquire in and to any and all property of any kind or nature wheresoever situated.

TOGETHER WITH all and singular the tenements, hereditaments, prescriptions, servitudes and appurtenances belonging or in anywise appertaining to the aforementioned property or any part thereof, with the reversion and reversions, remainder and remainders and (subject to the provisions of Section 57 of the Mortgage) the tolls, rents, revenues, issues, earnings, income, product and profits thereof, and all the estate, right, title and interest and claim whatsoever, at law as well as in equity, which the Company now has or may hereafter acquire in and to the aforementioned property and franchises and every part and parcel thereof.

IT IS HEREBY AGREED by the Company that, subject to the provisions of subsection (I) of Section 87 of the Mortgage, all the property, rights, and franchises acquired by the Company (by purchase, consolidation, merger, donation, construction, erection or in any other way) after the date hereof, except any herein or in the Mortgage, as heretofore supplemented, expressly excepted, shall be and are as fully granted and conveyed hereby and by the Mortgage, and as fully embraced within the lien hereof and the lien of the Mortgage, as supplemented, as if such property, rights and franchises were now owned by the Company and were specifically described herein or in the Mortgage, as heretofore supplemented, and conveyed hereby or thereby. Provided that the following are not and are not intended to be now or hereafter granted, bargained, sold, released, conveyed, assigned, transferred, mortgaged, pledged, set over or confirmed hereunder and are hereby expressly excepted from the lien and operation of this Eighteenth Supplemental Indenture and from the lien and operation of the Mortgage, as heretofore supplemented, viz: (1) cash, shares of stock, bonds, notes and other obligations and other securities not hereafter specifically pledged, paid, deposited, delivered or held under the Mortgage, as heretofore supplemented, or covenanted so to be; (2) merchandise, equipment, apparatus,

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materials or supplies held for the purpose of sale or other disposition in the usual course of business; fuel, oil and similar materials and supplies consumable in the operation of any of the properties of the Company; all aircraft, tractors, rolling stock, trolley coaches, buses, motor coaches, automobiles, motor trucks, and other vehicles and materials and supplies held for the purpose of repairing or replacing (in whole or in part) any of the same; (3) bills, notes and accounts receivable, judgments, demands and choses in action, and all contracts, leases and operating agreements not specifically pledged under the Mortgage, as heretofore supplemented, or covenanted so to be; (4) the last day of the term of any lease or leasehold which may be or become subject to the lien of the Mortgage; (5) gas, petroleum, carbon, chemicals, light oils, tar products, electric energy, steam, water, ice, and other materials or products, manufactured, stored, generated, produced, purchased or acquired by the Company for sale, distribution or use in the ordinary course of its business; all timber, minerals, mineral rights and royalties and all Natural Gas and Oil Production Property, as defined in Section 4 of the Mortgage; and (6) the Company's franchise to be a corporation; provided, however, that the property and rights expressly excepted from the lien and operation of this Eighteenth Supplemental Indenture and from the lien and operation of the Mortgage, as heretofore supplemented, in the above subdivisions (2) and (3) shall (to the extent permitted by law) cease to be so excepted in the event and as of the date that either or both of the Trustees or a receiver or trustee shall enter upon and take possession of the Mortgaged and Pledged Property in the manner provided in Article XIII of the Mortgage by reason of the occurrence of a Default as defined in Section 65 thereof.

TO HAVE AND TO HOLD all such properties, real, personal and mixed, granted, bargained, sold, released, conveyed, assigned, transferred, mortgaged, pledged, set over or confirmed by the Company as aforesaid, or intended so to be, unto Stanley Burg and (to the extent of its legal capacity to hold the same for the purposes hereof) to Bankers Trust Company, as Trustees, and their successors and assigns forever.

IN TRUST NEVERTHELESS, for the same purposes and upon the same terms, trusts and conditions and subject to and with the same provisos and covenants as are set forth in the Mortgage, as heretofore supplemented, this Eighteenth Supplemental Indenture being supplemental thereto.

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AND IT IS HEREBY COVENANTED by the Company that all the terms, conditions, provisos, covenants and provisions contained in the Mortgage, as heretofore supplemented, shall affect and apply to the property hereinbefore described and conveyed, and to the estates, rights, obligations and duties of the Company and the Trustees and the beneficiaries of the trust with respect to said property, and to the Trustees and their successors in the trust, in the same manner and with the same effect as if the said property had been owned by the Company at the time of the execution of the Mortgage, and had been specifically and at length described in and conveyed to said Trustees by the Mortgage as a part of the property therein stated to be conveyed.

The Company further covenants and agrees to and with the Trustees and their successors in said trust under the Mortgage, as follows:

ARTICLE I.

Nineteenth Series of Bonds.

SECTION 1.01. There shall be a series of bonds designated "9 3/4% Series due 2015" (herein sometimes referred to as the "Nineteenth Series"), each of which shall also bear the descriptive title First Mortgage Bond, and the form thereof, which shall be established by Resolution of the Board of Directors of the Company, shall contain suitable provisions with respect to the matters hereinafter in this Article I specified. Bonds of the Nineteenth Series shall be limited to \$50,000,000, in aggregate principal amount at any one time Outstanding except as provided in Section 16 of the Mortgage and shall mature on July 1, 2015, and shall be issued as fully registered bonds in denominations of One Thousand Dollars and, at the option of the Company, in any multiple or multiples of One Thousand Dollars (the exercise of such option to be evidenced by the execution and delivery thereof). Bonds of the Nineteenth Series shall bear interest at the rate of 9 3/4% per annum, payable semi-annually on January 1 and July 1 of each year; and the principal of, and premium, if any, and interest on, each said bond shall be payable at the office or agency of the Company in the Borough of Manhattan, The City of New York, in such coin or currency of the United States of America as at the time of payment is legal tender for public and private debts. Bonds of the Nineteenth Series shall be dated as in Section 10 of the Mortgage provided.

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(I) Bonds of the Nineteenth Series shall be redeemable on and after July 1, 2000, either at the option of the Company or pursuant to the requirements of the Mortgage including Section 64 thereof, in whole at any time, or in part from time to time, prior to maturity, upon notice, as provided in Section 52 of the Mortgage, mailed at least thirty (30) days prior to the date fixed for redemption, at the following redemption prices, expressed in percentages of the principal amount of the bonds to be redeemed:

REDEMPTION PRICES

If redeemed during the 12 months period ending June 30,

2001.....104.63%	2009.....100.93%
2002.....104.17%	2010.....100.47%
2003.....103.70%	2011.....100.00%
2004.....103.24%	2012.....100.00%
2005.....102.78%	2013.....100.00%
2006.....102.32%	2014.....100.00%
2007.....101.85%	2015.....100.00%
2008.....101.39%	

in each case, together with accrued interest to the date fixed for redemption.

(II) At the option of the registered owner, any bonds of the Nineteenth Series, upon surrender thereof, for cancellation, at the office or agency of the Company in the Borough of Manhattan, The City of New York, shall (subject to the provisions of Section 12 of the Mortgage) be exchangeable for a like aggregate principal amount of bonds of the same series of other authorized denominations.

Transfers of bonds of the Nineteenth Series may be registered (subject to the provisions of Section 12 of the Mortgage) at the office or agency of the Company in the Borough of Manhattan, The City of New York.

Upon any registration of transfer or exchange of bonds of the Nineteenth Series, the Company may make a charge therefor sufficient to reimburse it for any tax or taxes or other governmental charge, as provided in Section 12 of the Mortgage, but the Company hereby waives any right to make a charge in addition thereto for any registration of exchange or transfer of bonds of the Nineteenth Series.

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ARTICLE II.

Miscellaneous Provisions.

SECTION 2.01. The Company reserves the right, without any consent or other action by holders of bonds of the Nineteenth Series or of any subsequently created series, to amend the Mortgage, as heretofore amended and supplemented, as follows:

To amend subdivision (B) of Section 7 and the first paragraph following such subdivision (B) to read as follows:

"(B) the Annual Interest Requirements, being the interest requirements, if any, at the stated rate or rates therefor for twelve (12) months upon:

(i) all bonds Outstanding hereunder at the date of such certificate, except any for the payment of which the bonds applied for in all pending applications included under (ii) below are to be issued; provided that, if any such series of Outstanding bonds bears interest at varying rates, then the interest on such series of bonds shall be computed at the average annual rate in effect for such series during the period of twelve (12) consecutive calendar months (or any portion thereof in which bonds of such series are Outstanding) being used for the calculation of Adjusted Net Earnings; and if such Outstanding bonds have been issued after the end of such twelve (12) consecutive calendar months, then computed at the initial rate upon issuance;

(ii) all bonds then applied for in pending applications, including the application in connection with which such certificate is made, computed at the initial rate upon issuance;

(iii) all Qualified Lien Bonds which will be Outstanding immediately after the authentication of the bonds then applied for in pending applications, including the application in connection with which such certificate is made; provided that, if any Qualified Lien Bonds bear interest at varying rates, then the interest on such Qualified Lien Bonds shall be computed at the average annual rate in effect for such Qualified Lien Bonds during the period

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of twelve (12) consecutive calendar months (or any portion thereof in which such Qualified Lien Bonds are Outstanding) being used for the calculation of Adjusted Net Earnings; and if such Qualified Lien Bonds have been issued after the end of such last month, then computed at the initial rate upon issuance;

(iv) the principal amount of all other indebtedness (except indebtedness for the payment of which the bonds applied for in all pending applications included under (ii) above are to be issued and indebtedness for the purchase, payment or redemption of which moneys in the necessary amount shall have been deposited with or be held by the Corporate Trustee or the trustee or other holder of a Qualified Lien or lien prior to the Lien of this Indenture upon property subject to the Lien of this Indenture with irrevocable direction so to apply the same; provided that, in the case of redemption, the notice required therefor shall have been given or have been provided for to the satisfaction of the Corporate Trustee), outstanding in the hands of the public on the date of such certificate and secured by lien prior to the Lien of this Indenture upon property subject to the Lien of this Indenture, if said indebtedness has been assumed by the Company or if the Company customarily pays the interest upon the principal thereof; provided further that, if any such indebtedness bears interest at varying rates, then the interest on such indebtedness shall be computed at the average annual rate in effect for such indebtedness during the period of twelve (12) consecutive calendar months (or any portion thereof in which such indebtedness is outstanding) being used for the calculation of Adjusted Net Earnings; and if such indebtedness has been issued after the end of such twelve (12) consecutive calendar months, then computed at the initial rate upon issuance.

In calculating such Adjusted Net Earnings, all the Company's expenses for taxes (other than income, profits and other taxes measured by, or dependent on, net income), assessments, rentals and insurance shall be included in its operating expenses, or otherwise deducted from its revenues and income; provided, however, that no expenses or provisions for interest

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on any of its indebtedness or for the amortization of debt discount, premium and expense, or loss on reacquired debt, amortization of property (other than depreciation or other similar provisions for property retirement), or for other amortization, or for any other extraordinary charge to income of whatever kind or nature, or for refunds of revenues previously collected by the Company subject to possible refund, or for any improvement or sinking fund or other device for the retirement of any indebtedness, shall be required to be included in operating expenses to be deducted from or shall be otherwise required to be deducted from, its revenues or its other income and no extraordinary items of any kind or nature shall be included in calculating such Adjusted Net Earnings."

SECTION 2.02. The Company reserves the right, without any consent or other action by holders of bonds of the Nineteenth Series or of any subsequently created series, to amend the Mortgage, as heretofore amended and supplemented, as follows:

To amend the provisions of Sections 25, 26, 59 and 61 of the Mortgage by substituting the phrase "seventy per centum (70%)" for the phrase "sixty per centum (60%)" and substituting the phrase "ten-sevenths (10/7ths)" for the phrase "ten-sixths (10/6ths)" each time such phrase or phrases occur in said Sections.

SECTION 2.03. The Company reserves the right, without any consent or other action by holders of bonds of the Nineteenth Series or of any subsequently created series, to amend the Mortgage, as heretofore amended and supplemented, as follows:

To amend subdivision (1) of Section 59 of the Mortgage to read as follows:

"(i) an Officers' Certificate describing in reasonable detail the property to be released and requesting such release";

To amend subdivisions (3)(b) and (c) of Section 59 of the Mortgage to read as follows:

"(b) the fair value, and the Cost (or as to Property Additions constituting Funded Property of which the fair value to the Company at the time the same became Funded Property was less than the Cost, then such fair value in lieu of Cost), in the opinion of the signers, of the property (or securities) to be released; (c) the Cost

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(or as to Property Additions constituting Funded Property of which the fair value to the Company at the time the same became Funded Property was less than the Cost, then such fair value in lieu of Cost), in the opinion of the signers, of any portion thereof that is Funded Property;"

To amend the first six lines of subdivision (4) of Section 59 of the Mortgage to read as follows:

"(4) an amount in cash, to be held by the Corporate Trustee as part of the Mortgaged and Pledged Property, equivalent to the amount, if any, by which the Cost (or as to Property Additions constituting Funded Property of which the fair value to the Company at the time the same became Funded Property was less than the Cost, then such fair value in lieu of Cost) of the property to be released, as specified in the Engineer's Certificate provided for in subdivision (3) above, exceeds the aggregate of the following items:"

To amend Section 60 of the Mortgage by inserting "(I)" before the word "Unless" in the first line thereof, and by adding the following Subsection (II) after Section 60 (I).

"(II) Unless the Company is in default in the payment of the interest on any bonds then Outstanding hereunder or one or more of the Defaults defined in Section 65 hereof shall have occurred and be continuing, the Company may obtain the release of any of the Mortgaged and Pledged Property which is not Funded Property, except cash then held by the Corporate Trustee (provided, however, that Qualified Lien Bonds deposited with the Corporate Trustee shall not be released except as provided in Article IX hereof and obligations secured by purchase money mortgage deposited with the Corporate Trustee shall not be released except as provided in Section 61 hereof), and the Trustees or the Corporate Trustee shall release all the right, title and interest of the Trustees in and to the same from the Lien hereof upon the application of the Company and receipt by the Corporate Trustee of the following (in lieu of complying with the requirements of Section 59 hereof):

(1) an Officers' Certificate complying with the requirements of Section 121 hereof and describing in reasonable detail the property to be released and requesting such release, and stating:

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(a) that the Company is not in default in the payment of interest on any bonds then Outstanding hereunder and that none of the Defaults defined in Section 65 hereof has occurred and is continuing;

(b) that the Company has sold, leased, granted an interest in property, exchanged, dedicated or disposed of, or intends or has agreed to sell, lease, grant an interest in property, exchange, dedicate or dispose of, or that a governmental body or agency has exercised a right to order the Company to divest itself of, the property to be released;

(c) that the property to be released is not Funded Property;

(d) that (except in any case where a governmental body or agency has exercised a right to order the Company to divest itself of such property) such release is in the opinion of the signers desirable in the conduct of the business of the Company; and

(e) the amount of cash and/or principal amount of obligations secured by purchase money mortgage received or to be received for any portion of said property sold to any Federal, State, County, Municipal or other governmental bodies or agencies or public or semi-public corporations, districts, or authorities;

(2) an Engineer's Certificate, complying with the requirements of Section 121 hereof, made and dated not more than ninety (90) days prior to the date of such application, stating:

(a) the fair value, in the opinion of the signers, of the property (or securities) to be released;

(b) that in the opinion of the signers such release will not impair the security under this Indenture in contravention of the provisions hereof; and

(c) that the Company has Property Additions constituting property which is

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not Funded Property (not including the Property Additions then being released) of a Cost or fair value to the Company (whichever is less) of not less than one dollar (\$1) (after making any deductions and any additions pursuant to the provisions of Section 4 hereof) and after deducting the Cost of the property then being released;

(3) an Opinion of Counsel complying with the requirements of Section 121 hereof and stating that all conditions precedent provided for in this Indenture relating to the release of the property in question have been complied with; and

(4) in case the Trustees or the Corporate Trustee shall be requested to release any franchise, an Opinion of Counsel complying with the requirements of Section 121 hereof and stating that in his or their opinion such release will not impair to any material extent the right of the Company to operate any of its remaining properties."

To amend the fourth paragraph of Section 3 of the Mortgage to read as follows:

"The term "Engineer's Certificate" shall mean a certificate signed by the President or a Vice-President of the Company and by an Engineer (who may be an employee of the Company) appointed by the Board of Directors of the Company, provided, however, if any property or securities are to be released from the Lien of this Indenture, the Engineer's Certificate as to the fair value of such property or securities and as to matters referred to in clause (f) of subdivision (3) of Section 59 hereof or in clause (b) of subdivision (2) of Section 60 (II) hereof shall be made by an independent Engineer, appraiser, or other expert, if the fair value of such property or securities and of all other property or securities released since the commencement of the then current calendar year, as set forth in the certificates required by this Indenture, is ten per centum (10%) or more of the aggregate principal amount of the bonds at the time Outstanding; but such a certificate of an independent Engineer, appraiser, or other expert shall not be required in the case of any release of property or securities, if the fair value thereof as set forth in the certificates required by this Indenture is less than Twenty-five

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Thousand Dollars (\$25,000) or less than one per centum (1%) of the aggregate principal amount of the bonds at the time Outstanding. If and to the extent required by the provisions of Section 121 hereof, each such certificate shall include the statements provided for in said Section."

SECTION 2.04. Subject to the amendments provided for in this Eighteenth Supplemental Indenture, the terms defined in the Mortgage, as heretofore supplemented, shall, for all purposes of this Eighteenth Supplemental Indenture, have the meanings specified in the Mortgage, as heretofore supplemented.

SECTION 2.05. The Trustees hereby accept the trusts hereby declared, provided, created or supplemented, and agree to perform the same upon the terms and conditions herein and in the Mortgage, as heretofore supplemented, set forth, including the following:

The Trustees shall not be responsible in any manner whatsoever for or in respect of the validity or sufficiency of this Eighteenth Supplemental Indenture or for or in respect of the recitals contained herein, all of which recitals are made by the Company solely. In general each and every term and condition contained in Article XVII of the Mortgage shall apply to and form part of this Eighteenth Supplemental Indenture with the same force and effect as if the same were herein set forth in full, with such omissions, variations and insertions, if any, as may be appropriate to make the same conform to the provisions of the Eighteenth Supplemental Indenture.

SECTION 2.06. Whenever in this Eighteenth Supplemental Indenture any of the parties hereto is named or referred to, this shall, subject to the provisions of Articles XVI and XVII of the Mortgage, be deemed to include the successors or assigns of such party, and all the covenants and agreements in this Eighteenth Supplemental Indenture contained by or on behalf of the Company or by or on behalf of the Trustees shall bind and inure to the benefit of the respective successors and assigns of such parties whether so expressed or not.

SECTION 2.07. Nothing in this Eighteenth Supplemental Indenture, expressed or implied, is intended, or shall be construed, to confer upon, or to give to, any person, firm or corporation, other than the parties hereto and the holders of the bonds and coupons outstanding under the Mortgage, any right, remedy, or claim under or by reason of this Eighteenth Supplemental Indenture or any

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covenant, condition, stipulation, promise or agreement hereof, and all the covenants, conditions, stipulations, promises and agreements by or on behalf of the Company as set forth in this Eighteenth Supplemental Indenture shall be for the sole and exclusive benefit of the parties hereto, and of the holders of the bonds and of the coupons outstanding under the Mortgage.

SECTION 2.08. This Eighteenth Supplemental Indenture has been executed in several identical counterparts, each of which shall be an original and all of which shall constitute but one and the same instrument.

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IN WITNESS WHEREOF, Northwest Natural Gas Company, party hereto of the first part, has caused its corporate name to be hereunto affixed, and this instrument to be signed and sealed by its President or one of its Vice Presidents, and its corporate seal to be attested by its Secretary or one of its Assistant Secretaries for and in its behalf on the 28th day of June, 1990, as of July 1, 1990, in Portland, Oregon; Bankers Trust Company, one of the parties hereto of the second part, has caused its corporate name to be hereunto affixed, and this instrument to be signed and sealed by one of its Vice Presidents or one of its Assistant Vice Presidents and its corporate seal to be attested by one of its Assistant Secretaries on the 29th day of June, 1990, as of July 1, 1990, in The City of New York; and Stanley Burg, one of the parties hereto of the second part, has hereunto set his hand and affixed his seal, in The City of New York, on the 2nd day of July, 1990, as of July 1, 1990.

NORTHWEST NATURAL GAS COMPANY

[CORPORATE SEAL]

By Bruce R. DeBolt
Senior Vice President and
Chief Financial Officer

Attest:

C. J. Rue
Secretary

Executed, sealed and delivered by
NORTHWEST NATURAL GAS COMPANY in
the presence of:

Susana M. Jordan

Sharon A. Khormooji

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BANKERS TRUST COMPANY, as Trustee,

[CORPORATE SEAL]

By Barbara A. Joiner
Vice President

Attest:

Rosemary Melendez
Assistant Secretary

Stanley Burg
STANLEY BURG, as Trustee

Executed, sealed and
delivered by BANKERS TRUST
COMPANY and STANLEY BURG
in the presence of:

John M. Stuart

Maria Ross

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STATE OF OREGON)
 : ss.:
COUNTY OF MULTNOMAH)

June 28, A.D. 1990.

Before me personally appeared BRUCE R. DEBOLT, who, being duly sworn, did say that he is Senior Vice President and Chief Financial Officer, of NORTHWEST NATURAL GAS COMPANY and that the seal affixed to the foregoing instrument is the corporate seal of said Corporation and that said instrument was signed and sealed in behalf of said Corporation by authority of its Board of Directors; and he acknowledged said instrument to be its voluntary act and deed.

On this 28th day of June, 1990, before me personally appeared BRUCE R. DEBOLT, to me known to be Senior Vice President and Chief Financial Officer of NORTHWEST NATURAL GAS COMPANY, one of the corporations that executed the within and foregoing instrument, and acknowledged said instrument to be the free and voluntary act and deed of said Corporation, for the uses and purposes therein mentioned, and on oath stated that he was authorized to execute said instrument and that the seal affixed is the corporate seal of said Corporation.

IN WITNESS WHEREOF I have hereunto set my hand and affixed my official seal the day and year first above written.

[NOTARIAL SEAL]

Virginia M. Vance

VIRGINIA M. VANCE
Notary Public, State of Oregon
My Commission Expires March 24, 1991

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STATE OF NEW YORK)
 : ss.:
COUNTY OF NEW YORK)

June 29, A.D. 1990.

Before me personally appeared BARBARA A. JOINER, who, being duly sworn, did say that she is a Vice President of BANKERS TRUST COMPANY and that the seal affixed to the foregoing instrument is the corporate seal of said Corporation and that said instrument was signed and sealed in behalf of said Corporation by authority of its Board of Directors; and she acknowledged said instrument to be its voluntary act and deed.

On this 29th day of June, 1990, before me personally appeared BARBARA A. JOINER, to me known to be a Vice President of BANKERS TRUST COMPANY, one of the corporations that executed the within and foregoing instrument, and acknowledged said instrument to be the free and voluntary act and deed of said Corporation, for the uses and purposes therein mentioned, and on oath stated that she was authorized to execute said instrument and that the seal affixed is the corporate seal of said Corporation.

IN WITNESS WHEREOF I have hereunto set my hand and affixed my official seal the day and year first above written.

[NOTARIAL SEAL]

Desiree Marshall

DESIREE MARSHALL
Notary Public, State of New York
No. 24-4885294
Qualified in Kings County
Certificate Filed in New York County
Commission Expires February 17, 1991

SUMMARY OF RECORDING DATA
IN THE STATE OF OREGON

Real Property Mortgage Records

<u>Counterpart No.</u>	<u>County</u>	<u>Date Recorded</u>	<u>Book, Film or Reel</u>	<u>Page</u>
12	Benton	July 5, 1990	M-124638-90	-
13	Clackamas	July 5, 1990	90 32191	-
14	Clatsop	July 5, 1990	740	116
15	Columbia	July 6, 1990	90-3628	-
16	Coos	July 5, 1990	90-7-0187	-
17	Douglas	July 5, 1990	1103	916
18	Hood River	July 5, 1990	901847	-
19	Lane	July 5, 1990	9031527	-
20	Lincoln	July 5, 1990	218	2391
21	Linn	July 5, 1990	535	950
22	Marion	July 9, 1990	783	40
23	Multnomah	July 5, 1990	2320	0466
24	Polk	July 6, 1990	233	1777
25	Tillamook	July 5, 1990	329	220
26	Wasco	July 5, 1990	902494	-
27	Washington	July 5, 1990	90-35190	-
28	Yamhill	July 6, 1990	F245P0613	-

Filed as a Financing Statement

<u>Counterpart No.</u>	<u>Office</u>	<u>Date Filed for Record</u>	<u>File No.</u>
10	Secretary of State	July 10, 1990	P03266

IN THE STATE OF WASHINGTON
Real Property Mortgage Records

<u>Counterpart No.</u>	<u>County</u>	<u>Date Recorded</u>	<u>Book, Film or Reel</u>	<u>Page</u>
30	Clark	July 5, 1990	9007050038	
31	Klickitat	July 5, 1990	264	877
32	Skamania	July 5, 1990	119	651

File as a Financing Statement

<u>Counterpart No.</u>	<u>Office</u>	<u>Date Filed for Record</u>	<u>File No.</u>
29	Secretary of State	July 19, 1990	90-200-0195

[CONFORMED COPY]

NORTHWEST NATURAL GAS COMPANY

TO

BANKERS TRUST COMPANY

AND

STANLEY BURG (SUCCESSOR TO R. G. PAGE AND J. C. KENNEDY),

As Trustees under the Mortgage and
Deed of Trust, dated as of July 1,
1946, of Portland Gas & Coke Company
(now Northwest Natural Gas Company)

NINETEENTH SUPPLEMENTAL INDENTURE
providing among other things for
First Mortgage Bonds, designated
Secured Medium-Term Notes, Series A

Dated as of June 1, 1991

NINETEENTH SUPPLEMENTAL INDENTURE

INDENTURE, dated as of the 1st day of June, 1991, made and entered into by and between NORTHWEST NATURAL GAS COMPANY (formerly Portland Gas & Coke Company), a corporation of the State of Oregon, whose post office address is One Pacific Square, 220 N.W. Second Avenue, Portland, Oregon 97209 (hereinafter sometimes called the Company), party of the first part, and BANKERS TRUST COMPANY, a corporation of the State of New York, whose post office address is Four Albany Street, New York, New York 10006 (hereinafter sometimes called the Corporate Trustee) and STANLEY BURG (successor to R. G. PAGE and J. C. KENNEDY), whose post office address is c/o Bankers Trust Company, Four Albany Street, New York, New York 10006 (hereinafter sometimes called the Co-Trustee), parties of the second part (the Corporate Trustee and the Co-Trustee being hereinafter together sometimes called the Trustees), as Trustees under the Mortgage and Deed of Trust, dated as of July 1, 1946 (hereinafter called the Mortgage), executed and delivered by Portland Gas & Coke Company (now Northwest Natural Gas Company) to secure the payment of bonds issued or to be issued under and in accordance with the provisions of the Mortgage, this indenture (hereinafter called Nineteenth Supplemental Indenture) being supplemental thereto;

WHEREAS the Mortgage was or is to be recorded in the official records of various counties in the States of Oregon and Washington which counties include or will include all counties in which this Nineteenth Supplemental Indenture is to be recorded; and

WHEREAS by the Mortgage the Company covenanted that it would execute and deliver such supplemental indenture or indentures and such further instruments and do such further acts as might be necessary or proper to carry out more effectually the purposes of the Mortgage and to make subject to the lien of the Mortgage any property thereafter acquired, made or constructed and intended to be subject to the lien thereof; and

WHEREAS the Company executed and delivered to the Trustees its First Supplemental Indenture, dated as of June 1, 1949 (hereinafter called its First Supplemental Indenture), its Second Supplemental Indenture, dated as of March 1, 1954 (hereinafter called its Second Supplemental Indenture), its Third Supplemental Indenture, dated as of April 1, 1956 (hereinafter called its Third Supplemental Indenture), its Fourth Supplemental Indenture, dated as of

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February 1, 1959 (hereinafter called its Fourth Supplemental Indenture), its Fifth Supplemental Indenture, dated as of July 1, 1961 (hereinafter called its Fifth Supplemental Indenture), its Sixth Supplemental Indenture, dated as of January 1, 1964 (hereinafter called its Sixth Supplemental Indenture), its Seventh Supplemental Indenture, dated as of March 1, 1966 (hereinafter called its Seventh Supplemental Indenture), its Eighth Supplemental Indenture, dated as of December 1, 1969 (hereinafter called its Eighth Supplemental Indenture), its Ninth Supplemental Indenture, dated as of April 1, 1971 (hereinafter called its Ninth Supplemental Indenture), its Tenth Supplemental Indenture, dated as of January 1, 1975 (hereinafter called its Tenth Supplemental Indenture), its Eleventh Supplemental Indenture, dated as of December 1, 1975 (hereinafter called its Eleventh Supplemental Indenture), its Twelfth Supplemental Indenture, dated as of July 1, 1981 (hereinafter called its Twelfth Supplemental Indenture), its Thirteenth Supplemental Indenture, dated as of June 1, 1985 (hereinafter called its Thirteenth Supplemental Indenture), its Fourteenth Supplemental Indenture, dated as of November 1, 1985 (hereinafter called its Fourteenth Supplemental Indenture), its Fifteenth Supplemental Indenture, dated as of July 1, 1986 (hereinafter called its Fifteenth Supplemental Indenture), its Sixteenth Supplemental Indenture, dated as of November 1, 1988 (hereinafter called its Sixteenth Supplemental Indenture), and its Seventeenth Supplemental Indenture, dated as of October 1, 1989 (hereinafter called its Seventeenth Supplemental Indenture); and

WHEREAS said First through Seventeenth Supplemental Indentures were filed for record, and were recorded and indexed, as a mortgage of both real and personal property, in the official records of various counties in the States of Oregon and Washington which counties include or will include all counties in which this Nineteenth Supplemental Indenture is to be recorded; and

WHEREAS the Company executed and delivered to the Trustees its Eighteenth Supplemental Indenture, dated as of July 1, 1990 (hereinafter called its Eighteenth Supplemental Indenture); and

WHEREAS said Eighteenth Supplemental Indenture was filed for record, and was recorded and indexed, as a mortgage of both real and personal property, and financing statements were filed, in the official records of the several counties and other offices in the States of Oregon and Washington listed below, as follows:

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OREGON

Real Property Mortgage Records

<u>County</u>	<u>Date Recorded</u>	<u>Book, Film or Reel</u>	<u>Page</u>
Benton	July 5, 1990	M-124638-90	--
Clackamas	July 5, 1990	90 32191	--
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Polk	July 6, 1990	233	1777
Tillamook	July 5, 1990	329	220
Wasco	July 5, 1990	902494	--
Washington	July 5, 1990	90-35190	--
Yamhill	July 6, 1990	F245P0613	--

Filed as a Financing Statement

<u>Office</u>	<u>Date Filed for Record</u>	<u>File No.</u>
Secretary of State	July 10, 1990	P03266

WASHINGTON

Real Property Mortgage Records

<u>County</u>	<u>Date Recorded</u>	<u>Book, Film or Reel</u>	<u>Page</u>
Clark	July 5, 1990	9007050038	
Klickitat	July 5, 1990	264	877
Skamania	July 5, 1990	119	651

Filed as a Financing Statement

<u>Office</u>	<u>Date Filed for Record</u>	<u>File Number</u>
Secretary of State	July 19, 1990	90-200-0195

; and

WHEREAS an instrument dated as of June 14, 1951, was executed by the Company appointing J. C. KENNEDY as Co-Trustee in succession to said R. G. PAGE (resigned) under the Mortgage and by J. C. KENNEDY accepting the appointment as Co-Trustee under the Mortgage in succession to the said R. G. PAGE, which instrument was recorded in various counties in the States of Oregon and Washington; and

WHEREAS, in the Ninth Supplemental Indenture STANLEY BURG was appointed by the Company as Co-Trustee under the Mortgage in succession to said J. C. KENNEDY (resigned) and in the Ninth Supplemental Indenture STANLEY BURG accepted such appointment as Co-Trustee under the Mortgage in succession to said J. C. KENNEDY; and

WHEREAS in addition to the property described in the Mortgage, as heretofore supplemented, the Company has acquired certain other property, rights and interests in property; and

WHEREAS, the Company has heretofore issued, in accordance with the provisions of the Mortgage, as supplemented, the following series of First Mortgage Bonds:

<u>Series</u>	<u>Principal Amount Outstanding</u>
8-5/8% Series due 1996.....	\$11,658,000
10-1/8% Series due 1995.....	\$15,000,000
10.35% Series due November 1, 1997.....	\$15,000,000
9-3/8% Series due 2011.....	\$46,000,000
9.80% Series due 2018.....	\$24,938,000
9-1/8% Series due 2019.....	\$25,000,000
9-3/4% Series due 2015.....	\$50,000,000

; and

WHEREAS Section 8 of the Mortgage provides that the form of each series of bonds (other than the First Series) issued thereunder shall be established by Resolution of the Board of Directors of the Company; that the form of such series, as established by said Board of Di-

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rectors, shall specify the descriptive title of the bonds and various other terms thereof; and that such Series may also contain such provisions not inconsistent with the provisions of the Mortgage as the Board of Directors may, in its discretion, cause to be inserted therein expressing or referring to the terms and conditions upon which such bonds are to be issued and/or secured under the Mortgage; and

WHEREAS Section 120 of the Mortgage provides, among other things, that any power, privilege or right expressly or impliedly reserved to or in any way conferred upon the Company by any provision of the Mortgage, whether such power, privilege or right is in any way restricted or is unrestricted, may (to the extent permitted by law) be in whole or in part waived or surrendered or subjected to any restriction if at the time unrestricted or to additional restriction if already restricted, and the Company may enter into any further covenants, limitations or restrictions for the benefit of any one or more series of bonds issued thereunder, or the Company may cure any ambiguity contained therein or in any supplemental indenture or may (in lieu of establishment by Resolution as provided in Section 8 of the Mortgage) establish the terms and provisions of any series of bonds other than said First Series, by an instrument in writing executed and acknowledged by the Company in such manner as would be necessary to entitle a conveyance of real estate to record in all of the states in which any property at the time subject to the lien of the Mortgage shall be situated; and

WHEREAS the Company now desires to create a new series of bonds and (pursuant to the provisions of Section 120 of the Mortgage) to add to its covenants and agreements contained in the Mortgage, as heretofore supplemented, certain other covenants and agreements to be observed by it and to alter and amend in certain respects the covenants and provisions contained in the Mortgage, as heretofore supplemented and amended; and

WHEREAS the execution and delivery by the Company of this Nineteenth Supplemental Indenture, and the terms of the bonds of the Twentieth Series hereinafter referred to, have been duly authorized by the Board of Directors of the Company by appropriate resolutions of said Board of Directors;

NOW, THEREFORE, THIS INDENTURE WITNESSETH:

That Northwest Natural Gas Company, in consideration of the premises and of One Dollar to it duly paid

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by the Trustees at or before the ensembling and delivery of these presents, the receipt whereof is hereby acknowledged, and in further assurance of the estate, title and rights of the Trustees, and in order further to secure the payment both of the principal of and interest and premium, if any, on the bonds from time to time issued under the Mortgage, according to their tenor and effect, and the performance of all the provisions of the Mortgage (including any instruments supplemental thereto and any modification made as in the Mortgage provided) and of said bonds, hereby grants, bargains, sells, releases, conveys, assigns, transfers, mortgages, pledges, sets over and confirms (subject, however, to Excepted Encumbrances, as defined in Section 6 of the Mortgage) unto Stanley Burg and (to the extent of its legal capacity to hold the same for the purposes hereof) to Bankers Trust Company, as Trustees under the Mortgage, and to their successor or successors in said trust, and to said Trustees and their successors and assigns forever, all property, real, personal and mixed, acquired by the Company after the date of the Mortgage, of the kind or nature specifically mentioned in Article XXI of the Mortgage or of any other kind or nature (except any herein or in the Mortgage expressly excepted) now owned or, subject to the provisions of subsection (I) of Section 87 of the Mortgage, hereafter acquired by the Company (by purchase, consolidation, merger, donation, construction, erection or in any other way) and wheresoever situated, including (without in anywise limiting or impairing by the enumeration of the same the scope and intent of the foregoing) all lands, gas plants, by-product plants, gas holders, gas mains and pipes; all power sites, water rights, reservoirs, canals, raceways, dams, aqueducts, and all other rights or means for appropriating, conveying, storing and supplying water; all rights of way and roads; all plants for the generation of electricity by steam, water and/or other power; all power houses, street lighting systems, standards and other equipment incidental thereto, telephone, radio, television and air-conditioning systems and equipment incidental thereto, water works, water systems, steam heat and hot water plants, substations, lines, service and supply systems, bridges, culverts, tracts, ice or refrigeration plants and equipment, offices, buildings and other structures and the equipment thereof; all machinery, engines, boilers, dynamos, gas, electric and other machines, regulators, meters, transformers, generators, motors, gas, electrical and mechanical appliances, conduits, cables, gas, water, steam heat or other pipes, service pipes, fittings, valves and connections, pole and transmission lines, wires, cables, tools, implements, apparatus, furniture and chattels; all franchises, consents or permits; all lines for the trans-

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mission and distribution of gas, electric current, steam heat or water for any purpose including mains, pipes, conduits, towers, poles, wires, cables, ducts and all apparatus for use in connection therewith; all real estate, lands, easements, servitudes, licenses, permits, franchises, privileges, rights of way and other rights in or relating to public or private property, real or personal, or the occupancy of such property and (except as herein or in the Mortgage, as heretofore supplemented, expressly excepted) all right, title and interest the Company may now have or may hereafter acquire in and to any and all property of any kind or nature wheresoever situated.

TOGETHER WITH all and singular the tenements, hereditaments, prescriptions, servitudes and appurtenances belonging or in anywise appertaining to the aforementioned property or any part thereof, with the reversion and reversions, remainder and remainders and (subject to the provisions of Section 57 of the Mortgage) the tolls, rents, revenues, issues, earnings, income, product and profits thereof, and all the estate, right, title and interest and claim whatsoever, at law as well as in equity, which the Company now has or may hereafter acquire in and to the aforementioned property and franchises and every part and parcel thereof.

IT IS HEREBY AGREED by the Company that, subject to the provisions of subsection (I) of Section 87 of the Mortgage, all the property, rights, and franchises acquired by the Company (by purchase, consolidation, merger, donation, construction, erection or in any other way) after the date hereof, except any herein or in the Mortgage, as heretofore supplemented, expressly excepted, shall be and are as fully granted and conveyed hereby and by the Mortgage, and as fully embraced within the lien hereof and the lien of the Mortgage, as supplemented, as if such property, rights and franchises were now owned by the Company and were specifically described herein or in the Mortgage, as heretofore supplemented, and conveyed hereby or thereby. Provided that the following are not and are not intended to be now or hereafter granted, bargained, sold, released, conveyed, assigned, transferred, mortgaged, pledged, set over or confirmed hereunder and are hereby expressly excepted from the lien and operation of this Nineteenth Supplemental Indenture and from the lien and operation of the Mortgage, as heretofore supplemented, viz: (1) cash, shares of stock, bonds, notes and other obligations and other securities not hereafter specifically pledged, paid, deposited, delivered or held under the Mortgage, as heretofore supplemented, or covenanted so to be; (2) merchandise, equipment, apparatus,

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materials or supplies held for the purpose of sale or other disposition in the usual course of business; fuel, oil and similar materials and supplies consumable in the operation of any of the properties of the Company; all aircraft, tractors, rolling stock, trolley coaches, buses, motor coaches, automobiles, motor trucks, and other vehicles and materials and supplies held for the purpose of repairing or replacing (in whole or in part) any of the same; (3) bills, notes and accounts receivable, judgments, demands and choses in action, and all contracts, leases and operating agreements not specifically pledged under the Mortgage, as heretofore supplemented, or covenanted so to be; (4) the last day of the term of any lease or leasehold which may be or become subject to the lien of the Mortgage; (5) gas, petroleum, carbon, chemicals, light oils, tar products, electric energy, steam, water, ice, and other materials or products, manufactured, stored, generated, produced, purchased or acquired by the Company for sale, distribution or use in the ordinary course of its business; all timber, minerals, mineral rights and royalties and all Natural Gas and Oil Production Property, as defined in Section 4 of the Mortgage; and (6) the Company's franchise to be a corporation; provided, however, that the property and rights expressly excepted from the lien and operation of this Nineteenth Supplemental Indenture and from the lien and operation of the Mortgage, as heretofore supplemented, in the above subdivisions (2) and (3) shall (to the extent permitted by law) cease to be so excepted in the event and as of the date that either or both of the Trustees or a receiver or trustee shall enter upon and take possession of the Mortgaged and Pledged Property in the manner provided in Article XIII of the Mortgage by reason of the occurrence of a Default as defined in Section 65 thereof.

TO HAVE AND TO HOLD all such properties, real, personal and mixed, granted, bargained, sold, released, conveyed, assigned, transferred, mortgaged, pledged, set over or confirmed by the Company as aforesaid, or intended so to be, unto Stanley Burg and (to the extent of its legal capacity to hold the same for the purposes hereof) to Bankers Trust Company, as Trustees, and their successors and assigns forever.

IN TRUST NEVERTHELESS, for the same purposes and upon the same terms, trusts and conditions and subject to and with the same provisos and covenants as are set forth in the Mortgage, as heretofore supplemented, this Nineteenth Supplemental Indenture being supplemental thereto.

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AND IT IS HEREBY COVENANTED by the Company that all the terms, conditions, provisos, covenants and provisions contained in the Mortgage, as heretofore supplemented, shall affect and apply to the property hereinbefore described and conveyed, and to the estates, rights, obligations and duties of the Company and the Trustees and the beneficiaries of the trust with respect to said property, and to the Trustees and their successors in the trust, in the same manner and with the same effect as if the said property had been owned by the Company at the time of the execution of the Mortgage, and had been specifically and at length described in and conveyed to said Trustees by the Mortgage as a part of the property therein stated to be conveyed.

The Company further covenants and agrees to and with the Trustees and their successors in said trust under the Mortgage, as follows:

ARTICLE I.

Twentieth Series of Bonds.

SECTION 1.01. There shall be a series of bonds designated "Secured Medium-Term Notes, Series A" (herein sometimes referred to as the "Twentieth Series"), each of which shall also bear the descriptive title First Mortgage Bond, and the form thereof, which shall be established by Resolution of the Board of Directors of the Company, shall contain suitable provisions with respect to the matters hereinafter in this Article I specified. Bonds of the Twentieth Series shall be issued from time to time in an aggregate principal amount not to exceed \$100,000,000 at any one time Outstanding except as provided in Section 16 of the Mortgage and shall be issued as fully registered bonds in denominations of One Hundred Thousand Dollars and, at the option of the Company, in any multiple or multiples of One Thousand Dollars in excess of One Hundred Thousand Dollars (the exercise of such option to be evidenced by the execution and delivery thereof); each bond of the Twentieth Series shall mature on such date not less than nine months nor more than thirty years from its date of issue, shall bear interest at such rate or rates (which may be either fixed or variable) and have such other terms and provisions not inconsistent with the Mortgage as the Board of Directors may determine in accordance with a Resolution filed with the Corporate Trustee referring to this Nineteenth Supplemental Indenture; interest on bonds of the Twentieth Series which bear interest at a fixed rate shall be payable semi-annually on June 1 and December

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1 of each year and at maturity (each an interest payment date); and interest on bonds of the Twentieth Series which bear interest at a variable rate shall be payable on the dates which shall be established on the Issue Date with respect to such bonds and set forth in such bonds (each also an interest payment date). Notwithstanding the foregoing, so long as there is no existing default in the payment of interest on the bonds of the Twentieth Series, all bonds of the Twentieth Series authenticated by the Corporate Trustee after the Record Date hereinafter specified for any interest payment date, and prior to such interest payment date (unless the Issue Date is after such Record Date), shall be dated the date of authentication, but shall bear interest from such interest payment date, and the person in whose name any bond of the Twentieth Series is registered at the close of business on any Record Date with respect to any interest payment date shall be entitled to receive the interest payable on such interest payment date, notwithstanding the cancellation of such bond of the Twentieth Series, upon any transfer or exchange thereof subsequent to the Record Date and on or prior to such interest payment date; provided, that, (i) if the Issue Date of bonds of the Twentieth Series of a designated interest rate and maturity is after a Record Date and prior to the corresponding interest payment date, such bonds shall bear interest from the Issue Date but payment of interest shall commence on the second interest payment date succeeding the Issue Date, and (ii) interest payable on the maturity date will be payable to the person to whom the principal thereof shall be payable. "Record Date" for bonds of the Twentieth Series which bear interest at a fixed rate shall mean May 15 for interest payable June 1 and November 15 for interest payable December 1, and for bonds of the Twentieth Series which bear interest at a variable rate, the date 15 calendar days prior to any interest payment date. "Issue Date" with respect to bonds of the Twentieth Series of a designated interest rate and maturity shall mean the date of first authentication of bonds of such designated interest rate and maturity. The principal of, and premium, if any, and interest on, each said bond shall be payable at the office or agency of the Company in the Borough of Manhattan, The City of New York, in such coin or currency of the United States of America as at the time of payment is legal tender for public and private debts. Bonds of the Twentieth Series shall be dated as in Section 10 of the Mortgage provided.

(I) Bonds of the Twentieth Series shall be redeemable either at the option of the Company or pursuant to the requirements of the Mortgage, in whole at any time, or, if specified on the face of any bond of the Twentieth

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Series, in part from time to time, prior to maturity, upon notice, as provided in Section 52 of the Mortgage, mailed at least thirty (30) days prior to the date fixed for redemption, as the Board of Directors may determine in accordance with a Resolution filed with the Corporate Trustee referring to this Nineteenth Supplemental Indenture; provided, however, that bonds of the Twentieth Series shall not be redeemable pursuant to Section 64 of the Mortgage.

(II) At the option of the registered owner, any bonds of the Twentieth Series, upon surrender thereof, for cancellation, at the office or agency of the Company in the Borough of Manhattan, The City of New York, shall (subject to the provisions of Section 12 of the Mortgage) be exchangeable for a like aggregate principal amount of bonds of the same series of other authorized denominations which have the same Issue Date, maturity date, and redemption provisions, if any, and which bear interest at the same rate.

Transfers of bonds of the Twentieth Series may be registered (subject to the provisions of Section 12 of the Mortgage) at the office or agency of the Company in the Borough of Manhattan, The City of New York.

Upon any registration of transfer or exchange of bonds of the Twentieth Series, the Company may make a charge therefor sufficient to reimburse it for any tax or taxes or other governmental charge, as provided in Section 12 of the Mortgage, but the Company hereby waives any right to make a charge in addition thereto for any registration of exchange or transfer of bonds of the Twentieth Series.

ARTICLE II.

Miscellaneous Provisions.

SECTION 2.01. Subject to the amendments provided for in this Nineteenth Supplemental Indenture, the terms defined in the Mortgage, as heretofore supplemented, shall, for all purposes of this Nineteenth Supplemental Indenture, have the meanings specified in the Mortgage, as heretofore supplemented.

SECTION 2.02. The holders of bonds of the Twentieth Series consent that the Company may, but shall not be obligated to, fix a record date for the purpose of determining the holders of bonds of the Twentieth Series

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entitled to consent to any amendment, supplement or waiver. If a record date is fixed, those persons who were holders at such record date (or their duly designated proxies), and only those persons, shall be entitled to consent to such amendment, supplement or waiver or to revoke any consent previously given, whether or not such persons continue to be holders after such record date. No such consent shall be valid or effective for more than 90 days after such record date.

SECTION 2.03. The Trustees hereby accept the trusts hereby declared, provided, created or supplemented, and agree to perform the same upon the terms and conditions herein and in the Mortgage, as heretofore supplemented, set forth, including the following:

The Trustees shall not be responsible in any manner whatsoever for or in respect of the validity or sufficiency of this Nineteenth Supplemental Indenture or for or in respect of the recitals contained herein, all of which recitals are made by the Company solely. In general each and every term and condition contained in Article XVII of the Mortgage shall apply to and form part of this Nineteenth Supplemental Indenture with the same force and effect as if the same were herein set forth in full, with such omissions, variations and insertions, if any, as may be appropriate to make the same conform to the provisions of this Nineteenth Supplemental Indenture.

SECTION 2.04. Whenever in this Nineteenth Supplemental Indenture any of the parties hereto is named or referred to, this shall, subject to the provisions of Articles XVI and XVII of the Mortgage, be deemed to include the successors or assigns of such party, and all the covenants and agreements in this Nineteenth Supplemental Indenture contained by or on behalf of the Company or by or on behalf of the Trustees shall bind and inure to the benefit of the respective successors and assigns of such parties whether so expressed or not.

SECTION 2.05. Nothing in this Nineteenth Supplemental Indenture, expressed or implied, is intended, or shall be construed, to confer upon, or to give to, any person, firm or corporation, other than the parties hereto and the holders of the bonds and coupons outstanding under the Mortgage, any right, remedy, or claim under or by reason of this Nineteenth Supplemental Indenture or any covenant, condition, stipulation, promise or agreement hereof, and all the covenants, conditions, stipulations, promises and agreements by or on behalf of the Company as set forth in this Nineteenth Supplemental Indenture shall

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be for the sole and exclusive benefit of the parties hereto, and of the holders of the bonds and of the coupons outstanding under the Mortgage.

SECTION 2.06. Except to the extent specifically provided herein, no provision of this Nineteenth Supplemental Indenture is intended to reinstate any provisions in the Mortgage which were amended and superseded by the amendments to the Trust Indenture Act of 1939 effective as of November 15, 1990.

SECTION 2.07. This Nineteenth Supplemental Indenture has been executed in several identical counterparts, each of which shall be an original and all of which shall constitute but one and the same instrument.

IN WITNESS WHEREOF, Northwest Natural Gas Company, party hereto of the first part, has caused its corporate name to be hereunto affixed, and this instrument to be signed and sealed by its President or one of its Vice Presidents, and its corporate seal to be attested by its Secretary or one of its Assistant Secretaries for and in its behalf on the 10th day of June, 1991, as of June 1, 1991, in Portland, Oregon; Bankers Trust Company, one of the parties hereto of the second part, has caused its corporate name to be hereunto affixed, and this instrument to be signed and sealed by one of its Vice Presidents or one of its Assistant Vice Presidents and its corporate seal to be attested by one of its Assistant Secretaries on the 7th day of June, 1991, as of June 1, 1991, in The City of New York; and Stanley Burg, one of the parties hereto of the second part, has hereunto set his hand and affixed his seal, in The City of New York, on the 7th day of June, 1991, as of June 1, 1991.

NORTHWEST NATURAL GAS COMPANY

By Bruce R. DeBolt
Senior Vice President and
Chief Financial Officer

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Attest:

C.J. Rue
Secretary

Executed, sealed and delivered by
NORTHWEST NATURAL GAS COMPANY in
the presence of:

Susana M. Jordan

Lou-Wayne Steiger

BANKERS TRUST COMPANY, as Trustee,

By Jerry Olivo, Jr.
Assistant Vice President

Attest:

Nancy L. Wilson
Assistant Secretary

Stanley Burg
STANLEY BURG, as Trustee

Executed, sealed and
delivered by BANKERS TRUST
COMPANY and STANLEY BURG
in the presence of:

Eric Hawner

Shikha Dombek

STATE OF OREGON)
 : ss.:
COUNTY OF MULTNOMAH)

June 10, A.D. 1991.

Before me personally appeared BRUCE R. DEBOLT, who, being duly sworn, did say that he is Senior Vice President and Chief Financial Officer, of NORTHWEST NATURAL GAS COMPANY and that the seal affixed to the foregoing instrument is the corporate seal of said Corporation and that said instrument was signed and sealed in behalf of said Corporation by authority of its Board of Directors; and he acknowledged said instrument to be its voluntary act and deed.

On this 10th day of June, 1991, before me personally appeared BRUCE R. DEBOLT, to me known to be Senior Vice President and Chief Financial Officer of NORTHWEST NATURAL GAS COMPANY, one of the corporations that executed the within and foregoing instrument, and acknowledged said instrument to be the free and voluntary act and deed of said Corporation, for the uses and purposes therein mentioned, and on oath stated that he was authorized to execute said instrument and that the seal affixed is the corporate seal of said Corporation.

IN WITNESS WHEREOF I have hereunto set my hand and affixed my official seal the day and year first above written.

C.J. Rue
C.J. Rue
Notary Public, State of Oregon
My Commission Expires January 11, 1992

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STATE OF NEW YORK)
 : SS.:
COUNTY OF NEW YORK)

June 7, A.D. 1991.

Before me personally appeared JERRY OLIVO, JR., who, being duly sworn, did say that he is an Assistant Vice President of BANKERS TRUST COMPANY and that the seal affixed to the foregoing instrument is the corporate seal of said Corporation and that said instrument was signed and sealed in behalf of said Corporation by authority of its Board of Directors; and he acknowledged said instrument to be its voluntary act and deed.

On this 7th day of June, 1991, before me personally appeared JERRY OLIVO, JR., to me known to be an Assistant Vice President of BANKERS TRUST COMPANY, one of the corporations that executed the within and foregoing instrument, and acknowledged said instrument to be the free and voluntary act and deed of said Corporation, for the uses and purposes therein mentioned, and on oath stated that he was authorized to execute said instrument and that the seal affixed is the corporate seal of said Corporation.

IN WITNESS WHEREOF I have hereunto set my hand and affixed my official seal the day and year first above written.

Sandra Shirley
Notary Public, State of New York
No. 41-4847807
My Commission Expires May 31, 1993

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STATE OF NEW YORK)
 : ss.:
COUNTY OF NEW YORK)

June 7, A.D. 1991.

Before me personally appeared the above-named STANLEY BURG and acknowledged the foregoing instrument to be his voluntary act and deed.

On this day personally appeared before me STANLEY BURG to me known to be the individual described in and who executed the within and foregoing instrument, and acknowledged that he signed the same as his free and voluntary act and deed, for the uses and purposes therein mentioned.

Given under my hand and official seal this 7th day of June, 1991.

Sandra Shirley
Sandra Shirley
Notary Public, State of New York
No. 41-4847807
My Commission Expires May 31, 1993

IN THE STATE OF OREGON
Real Property Mortgage Records

<u>Counterpart No.</u>	<u>County</u>	<u>Date Recorded</u>	<u>Book, Film or Reel</u>	<u>Page</u>
5	Benton	June 14, 1991	M-135990-91	--
6	Clackamas	June 14, 1991	91-28344	--
7	Clatsop	June 14, 1991	760	836
8	Columbia	June 14, 1991	91-3499	--
9	Coos	June 14, 1991	91-06-0532	--
10	Douglas	June 14, 1991	1140	373
11	Hood River	June 18, 1991	911493	--
12	Lane	June 17, 1991	9127918	--
13	Lincoln	June 14, 1991	230	2261
14	Linn	June 14, 1991	566	2
15	Marion	June 14, 1991	861	37
16	Multnomah	June 14, 1991	2424	970
17	Polk	June 14, 1991	242	1891
18	Tillamook	June 14, 1991	335	496
19	Wasco	June 14, 1991	912001	--
20	Washington	June 14, 1991	91030895	--
21	Yamhill	June 14, 1991	F255P2185	--

Filed as a Financing Statement

<u>Counterpart No.</u>	<u>Office</u>	<u>Date Filed for Record</u>	<u>File No.</u>
3	Secretary of State	June 14, 1991	P56754

IN THE STATE OF WASHINGTON
Real Property Mortgage Records

<u>Counterpart No.</u>	<u>County</u>	<u>Date Recorded</u>	<u>Book, Film or Reel</u>	<u>Page</u>
23	Clark	June 14, 1991	9106140143	--
24	Klickitat	June 14, 1991	273	904
25	Skamania	June 18, 1991	123	757

Filed as a Financing Statement

<u>Counterpart No.</u>	<u>Office</u>	<u>Date Filed for Record</u>	<u>File No.</u>
22	Secretary of State	June 17, 1991	91-168-0134

NORTHWEST NATURAL GAS COMPANY

TO

BANKERS TRUST COMPANY

AND

STANLEY BURG (SUCCESSOR TO R. G. PAGE AND J. C. KENNEDY),

As Trustees under the Mortgage and
Deed of Trust, dated as of July 1,
1946, of Portland Gas & Coke Company
(now Northwest Natural Gas Company)

TWENTIETH SUPPLEMENTAL INDENTURE
providing, among other things, for
First Mortgage Bonds, designated
Secured Medium-Term Notes, Series B

Dated as of June 1, 1993

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TWENTIETH SUPPLEMENTAL INDENTURE

INDENTURE, dated as of the 1st day of June, 1993, made and entered into by and between NORTHWEST NATURAL GAS COMPANY (formerly Portland Gas & Coke Company), a corporation of the State of Oregon, whose post office address is One Pacific Square, 220 N.W. Second Avenue, Portland, Oregon 97209 (hereinafter sometimes called the Company), party of the first part, and BANKERS TRUST COMPANY, a corporation of the State of New York, whose post office address is Four Albany Street, New York, New York 10006 (hereinafter sometimes called the Corporate Trustee) and STANLEY BURG (successor to R. G. PAGE and J. C. KENNEDY), whose post office address is c/o Bankers Trust Company, Four Albany Street, New York, New York 10006 (hereinafter sometimes called the Co-Trustee), parties of the second part (the Corporate Trustee and the Co-Trustee being hereinafter together sometimes called the Trustees), as Trustees under the Mortgage and Deed of Trust, dated as of July 1, 1946 (hereinafter called the Mortgage), executed and delivered by Portland Gas & Coke Company (now Northwest Natural Gas Company) to secure the payment of bonds issued or to be issued under and in accordance with the provisions of the Mortgage, this indenture (hereinafter called Twentieth Supplemental Indenture) being supplemental thereto;

WHEREAS the Mortgage was or is to be recorded in the official records of various counties in the States of Oregon and Washington which counties include or will include all counties in which this Twentieth Supplemental Indenture is to be recorded; and

WHEREAS by the Mortgage the Company covenanted that it would execute and deliver such supplemental indenture or indentures and such further instruments and do such further acts as might be necessary or proper to carry out more effectually the purposes of the Mortgage and to make subject to the lien of the Mortgage any property thereafter acquired, made or constructed and intended to be subject to the lien thereof; and

WHEREAS the Company executed and delivered to the Trustees its First Supplemental Indenture, dated as of June 1, 1949 (hereinafter called its First Supplemental Indenture), its Second Supplemental Indenture, dated as of March 1, 1954 (hereinafter called its Second Supplemental Indenture), its Third Supplemental Indenture, dated as of April 1, 1956 (hereinafter called its Third Supplemental Indenture), its Fourth Supplemental Indenture, dated as of February 1, 1959 (hereinafter called its Fourth Supplemental Indenture), its Fifth Supplemental Indenture, dated as of July 1, 1961 (hereinafter called its Fifth Supplemental Indenture), its Sixth Supplemental Indenture, dated as of January 1, 1964 (hereinafter called its Sixth Supplemental Indenture), its Seventh Supplemental Indenture, dated as of March 1, 1966 (hereinafter

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called its Seventh Supplemental Indenture), its Eighth Supplemental Indenture, dated as of December 1, 1969 (hereinafter called its Eighth Supplemental Indenture), its Ninth Supplemental Indenture, dated as of April 1, 1971 (hereinafter called its Ninth Supplemental Indenture), its Tenth Supplemental Indenture, dated as of January 1, 1975 (hereinafter called its Tenth Supplemental Indenture), its Eleventh Supplemental Indenture, dated as of December 1, 1975 (hereinafter called its Eleventh Supplemental Indenture), its Twelfth Supplemental Indenture, dated as of July 1, 1981 (hereinafter called its Twelfth Supplemental Indenture), its Thirteenth Supplemental Indenture, dated as of June 1, 1985 (hereinafter called its Thirteenth Supplemental Indenture), its Fourteenth Supplemental Indenture, dated as of November 1, 1985 (hereinafter called its Fourteenth Supplemental Indenture), its Fifteenth Supplemental Indenture, dated as of July 1, 1986 (hereinafter called its Fifteenth Supplemental Indenture), its Sixteenth Supplemental Indenture, dated as of November 1, 1988 (hereinafter called its Sixteenth Supplemental Indenture), its Seventeenth Supplemental Indenture, dated as of October 1, 1989 (hereinafter called its Seventeenth Supplemental Indenture), and its Eighteenth Supplemental Indenture, dated as of July 1, 1990 (hereinafter called its Eighteenth Supplemental Indenture); and

WHEREAS said First through Eighteenth Supplemental Indentures were filed for record, and were recorded and indexed, as a mortgage of both real and personal property, in the official records of various counties in the States of Oregon and Washington which counties include or will include all counties in which this Twentieth Supplemental Indenture is to be recorded; and

WHEREAS the Company executed and delivered to the Trustees its Nineteenth Supplemental Indenture, dated as of June 1, 1991 (hereinafter called its Nineteenth Supplemental Indenture); and

WHEREAS said Nineteenth Supplemental Indenture was filed for record, and was recorded and indexed, as a mortgage of both real and personal property, and financing statements were filed, in the official records of the several counties and other offices in the States of Oregon and Washington listed below, as follows:

OREGON

Real Property Mortgage Records

<u>County</u>	<u>Date Recorded</u>	<u>Book, Film or Reel</u>	<u>Page</u>
Benton	June 14, 1991	M-135990-91	--
Clackamas	June 14, 1991	91-28344	--
Clatsop	June 14, 1991	760	836
Columbia	June 14, 1991	91-3499	--
Coos	June 14, 1991	91-06-0532	--
Douglas	June 14, 1991	1140	373
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Multnomah	June 14, 1991	2424	970
Polk	June 14, 1991	242	1891
Tillamook	June 14, 1991	335	496
Wasco	June 14, 1991	912001	--
Washington	June 14, 1991	91030895	--
Yamhill	June 14, 1991	F255P2185	--

Filed as a Financing Statement

<u>Office</u>	<u>Date Filed for Record</u>	<u>File No.</u>
Secretary of State	June 14, 1991	P56754

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WASHINGTON

Real Property Mortgage Records

<u>County</u>	<u>Date Recorded</u>	<u>Book, Film or Reel</u>	<u>Page</u>
Clark	June 14, 1991	9106140143	--
Klickitat	June 14, 1991	273	904
Skamania	June 18, 1991	123	757

Filed as a Financing Statement

<u>Office</u>	<u>Date Filed for Record</u>	<u>File No.</u>
Secretary of State	June 17, 1991	91-168-0134

WHEREAS an instrument dated as of June 14, 1951, was executed by the Company appointing J. C. KENNEDY as Co-Trustee in succession to said R. G. PAGE (resigned) under the Mortgage and by J. C. KENNEDY accepting the appointment as Co-Trustee under the Mortgage in succession to the said R. G. PAGE, which instrument was recorded in various counties in the States of Oregon and Washington; and

WHEREAS, in the Ninth Supplemental Indenture STANLEY BURG was appointed by the Company as Co-Trustee under the Mortgage in succession to said J. C. KENNEDY (resigned) and in the Ninth Supplemental Indenture STANLEY BURG accepted such appointment as Co-Trustee under the Mortgage in succession to said J. C. KENNEDY; and

WHEREAS in addition to the property described in the Mortgage, as heretofore supplemented, the Company has acquired certain other property, rights and interests in property; and

WHEREAS, the Company has heretofore issued, in accordance with the provisions of the Mortgage, as supplemented, and on the date hereof there remain outstanding, the following series of First Mortgage Bonds:

<u>Series</u>	<u>Principal Amount Outstanding</u>
8-5/8% Series due 1996.....	\$11,658,000
9-3/8% Series due 2011.....	\$46,000,000
9.80% Series due 2018.....	\$24,938,000
9-1/8% Series due 2019.....	\$25,000,000
9-3/4% Series due 2015.....	\$50,000,000
Secured Medium-Term Notes, Series A.....	\$50,000,000
; and	

WHEREAS Section 8 of the Mortgage provides that the form of each series of bonds (other than the First Series) issued thereunder shall be established by Resolution of the Board of Directors of the Company; that the form of such series, as established by said Board of Directors, shall specify the descriptive title of the bonds and various other terms thereof; and that such Series may also contain such provisions not inconsistent with the provisions of the Mortgage as the Board of Directors may, in its discretion, cause to be inserted therein expressing or referring to the terms and conditions upon which such bonds are to be issued and/or secured under the Mortgage; and

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WHEREAS Section 120 of the Mortgage provides, among other things, that any power, privilege or right expressly or impliedly reserved to or in any way conferred upon the Company by any provision of the Mortgage, whether such power, privilege or right is in any way restricted or is unrestricted, may (to the extent permitted by law) be in whole or in part waived or surrendered or subjected to any restriction if at the time unrestricted or to additional restriction if already restricted, and the Company may enter into any further covenants, limitations or restrictions for the benefit of any one or more series of bonds issued thereunder, or the Company may cure any ambiguity contained therein or in any supplemental indenture or may (in lieu of establishment by Resolution as provided in Section 8 of the Mortgage) establish the terms and provisions of any series of bonds other than said First Series, by an instrument in writing executed and acknowledged by the Company in such manner as would be necessary to entitle a conveyance of real estate to record in all of the states in which any property at the time subject to the lien of the Mortgage shall be situated; and

WHEREAS the Company now desires to create a new series of bonds and (pursuant to the provisions of Section 120 of the Mortgage) to add to its covenants and agreements contained in the Mortgage, as heretofore supplemented, certain other covenants and agreements to be observed by it and to alter and amend in certain respects the covenants and provisions contained in the Mortgage, as heretofore supplemented and amended; and

WHEREAS the execution and delivery by the Company of this Twentieth Supplemental Indenture, and the terms of the bonds of the Twenty-First Series hereinafter referred to, have been duly authorized by the Board of Directors of the Company by appropriate resolutions of said Board of Directors;

NOW, THEREFORE, THIS INDENTURE WITNESSETH:

That Northwest Natural Gas Company, in consideration of the premises and of One Dollar to it duly paid by the Trustees at or before the ensembling and delivery of these presents, the receipt whereof is hereby acknowledged, and in further assurance of the estate, title and rights of the Trustees, and in order further to secure the payment both of the principal of and interest and premium, if any, on the bonds from time to time issued under the Mortgage, according to their tenor and effect, and the performance of all the provisions of the Mortgage (including any instruments supplemental thereto and any modification made as in the Mortgage provided) and of said bonds, hereby grants, bargains, sells, releases, conveys, assigns, transfers, mortgages, pledges, sets over and confirms (subject, however, to Excepted Encumbrances, as defined in Section 6 of the Mortgage) unto Stanley Burg and (to the

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extent of its legal capacity to hold the same for the purposes hereof) to Bankers Trust Company, as Trustees under the Mortgage, and to their successor or successors in said trust, and to said Trustees and their successors and assigns forever, all property, real, personal and mixed, acquired by the Company after the date of the Mortgage, of the kind or nature specifically mentioned in Article XXI of the Mortgage or of any other kind or nature (except any herein or in the Mortgage expressly excepted) now owned or, subject to the provisions of subsection (I) of Section 87 of the Mortgage, hereafter acquired by the Company (by purchase, consolidation, merger, donation, construction, erection or in any other way) and wheresoever situated, including (without in anywise limiting or impairing by the enumeration of the same the scope and intent of the foregoing) all lands, gas plants, by-product plants, gas holders, gas mains and pipes; all power sites, water rights, reservoirs, canals, raceways, dams, aqueducts, and all other rights or means for appropriating, conveying, storing and supplying water; all rights of way and roads; all plants for the generation of electricity by steam, water and/or other power; all power houses, street lighting systems, standards and other equipment incidental thereto, telephone, radio, television and air-conditioning systems and equipment incidental thereto, water works, water systems, steam heat and hot water plants, substations, lines, service and supply systems, bridges, culverts, tracts, ice or refrigeration plants and equipment, offices, buildings and other structures and the equipment thereof; all machinery, engines, boilers, dynamos, gas, electric and other machines, regulators, meters, transformers, generators, motors, gas, electrical and mechanical appliances, conduits, cables, gas, water, steam heat or other pipes, service pipes, fittings, valves and connections, pole and transmission lines, wires, cables, tools, implements, apparatus, furniture and chattels; all franchises, consents or permits; all lines for the transmission and distribution of gas, electric current, steam heat or water for any purpose including mains, pipes, conduits, towers, poles, wires, cables, ducts and all apparatus for use in connection therewith; all real estate, lands, easements, servitudes, licenses, permits, franchises, privileges, rights of way and other rights in or relating to public or private property, real or personal, or the occupancy of such property and (except as herein or in the Mortgage, as heretofore supplemented, expressly excepted) all right, title and interest the Company may now have or may hereafter acquire in and to any and all property of any kind or nature wheresoever situated.

TOGETHER WITH all and singular the tenements, hereditaments, prescriptions, servitudes and appurtenances belonging or in anywise appertaining to the aforementioned property or any part thereof, with the reversion and reversions, remainder and remainders and (subject to the provisions of Section 57 of the Mortgage) the tolls, rents, revenues, issues, earnings, income,

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product and profits thereof, and all the estate, right, title and interest and claim whatsoever, at law as well as in equity, which the Company now has or may hereafter acquire in and to the aforementioned property and franchises and every part and parcel thereof.

IT IS HEREBY AGREED by the Company that, subject to the provisions of subsection (I) of Section 87 of the Mortgage, all the property, rights, and franchises acquired by the Company (by purchase, consolidation, merger, donation, construction, erection or in any other way) after the date hereof, except any herein or in the Mortgage, as heretofore supplemented, expressly excepted, shall be and are as fully granted and conveyed hereby and by the Mortgage, and as fully embraced within the lien hereof and the lien of the Mortgage, as supplemented, as if such property, rights and franchises were now owned by the Company and were specifically described herein or in the Mortgage, as heretofore supplemented, and conveyed hereby or thereby. Provided that the following are not and are not intended to be now or hereafter granted, bargained, sold, released, conveyed, assigned, transferred, mortgaged, pledged, set over or confirmed hereunder and are hereby expressly excepted from the lien and operation of this Twentieth Supplemental Indenture and from the lien and operation of the Mortgage, as heretofore supplemented, viz: (1) cash, shares of stock, bonds, notes and other obligations and other securities not hereafter specifically pledged, paid, deposited, delivered or held under the Mortgage, as heretofore supplemented, or covenanted so to be; (2) merchandise, equipment, apparatus, materials or supplies held for the purpose of sale or other disposition in the usual course of business; fuel, oil and similar materials and supplies consumable in the operation of any of the properties of the Company; all aircraft, tractors, rolling stock, trolley coaches, buses, motor coaches, automobiles, motor trucks, and other vehicles and materials and supplies held for the purpose of repairing or replacing (in whole or in part) any of the same; (3) bills, notes and accounts receivable, judgments, demands and choses in action, and all contracts, leases and operating agreements not specifically pledged under the Mortgage, as heretofore supplemented, or covenanted so to be; (4) the last day of the term of any lease or leasehold which may be or become subject to the lien of the Mortgage; (5) gas, petroleum, carbon, chemicals, light oils, tar products, electric energy, steam, water, ice, and other materials or products, manufactured, stored, generated, produced, purchased or acquired by the Company for sale, distribution or use in the ordinary course of its business; all timber, minerals, mineral rights and royalties and all Natural Gas and Oil Production Property, as defined in Section 4 of the Mortgage; and (6) the Company's franchise to be a corporation; provided, however, that the property and rights expressly excepted from the lien and operation of this Twentieth Supplemental Indenture and from the lien and operation of the

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Mortgage, as heretofore supplemented, in the above subdivisions (2) and (3) shall (to the extent permitted by law) cease to be so excepted in the event and as of the date that either or both of the Trustees or a receiver or trustee shall enter upon and take possession of the Mortgaged and Pledged Property in the manner provided in Article XIII of the Mortgage by reason of the occurrence of a Default as defined in Section 65 thereof.

TO HAVE AND TO HOLD all such properties, real, personal and mixed, granted, bargained, sold, released, conveyed, assigned, transferred, mortgaged, pledged, set over or confirmed by the Company as aforesaid, or intended so to be, unto Stanley Burg and (to the extent of its legal capacity to hold the same for the purposes hereof) to Bankers Trust Company, as Trustees, and their successors and assigns forever.

IN TRUST NEVERTHELESS, for the same purposes and upon the same terms, trusts and conditions and subject to and with the same provisos and covenants as are set forth in the Mortgage, as heretofore supplemented, this Twentieth Supplemental Indenture being supplemental thereto.

AND IT IS HEREBY COVENANTED by the Company that all the terms, conditions, provisos, covenants and provisions contained in the Mortgage, as heretofore supplemented, shall affect and apply to the property hereinbefore described and conveyed, and to the estates, rights, obligations and duties of the Company and the Trustees and the beneficiaries of the trust with respect to said property, and to the Trustees and their successors in the trust, in the same manner and with the same effect as if the said property had been owned by the Company at the time of the execution of the Mortgage, and had been specifically and at length described in and conveyed to said Trustees by the Mortgage as a part of the property therein stated to be conveyed.

The Company further covenants and agrees to and with the Trustees and their successors in said trust under the Mortgage, as follows:

ARTICLE I.

Twenty-First Series of Bonds.

SECTION 1.0.1. There shall be a series of bonds designated "Secured Medium-Term Notes, Series B" (herein sometimes referred to as the "Twenty-first Series"), each of which shall also bear the descriptive title "First Mortgage Bond", and the form thereof, which shall be established by Resolution of the Board of Directors of the Company, shall contain suitable provisions with

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respect to the matters hereinafter in this Article I specified. Bonds of the Twenty-first Series shall be issued from time to time as fully registered bonds in denominations of One Thousand Dollars and, at the option of the Company, in any multiple or multiples of One Thousand Dollars (the exercise of such option to be evidenced by the execution and delivery thereof); each bond of the Twenty-first Series shall mature on such date, shall bear interest at such rate or rates (which may be either fixed or variable) and have such other terms and provisions not inconsistent with the Mortgage as the Board of Directors may determine in accordance with a Resolution filed with the Corporate Trustee referring to this Twentieth Supplemental Indenture; interest on each bond of the Twenty-first Series which bears interest at either a fixed rate or a variable rate shall be payable on the dates which shall be established prior to the date of first authentication of such bond and set forth in such bond and at maturity (each an interest payment date). Notwithstanding the foregoing, so long as there shall be no existing default in the payment of interest on the bonds of the Twenty-first Series having the same designated interest rate, interest payment dates and maturity, each of such bonds authenticated by the Corporate Trustee after the Record Date for any interest payment date for such bonds, and prior to such interest payment date (unless the Issue Date is after such Record Date), shall be dated the date of authentication, but shall bear interest from such interest payment date, and the person in whose name such bond shall have been registered at the close of business on such Record Date shall be entitled to receive the interest payable on such interest payment date, notwithstanding the cancellation of such bond upon any transfer or exchange thereof subsequent to such Record Date and on or prior to such interest payment date; provided, that, (i) if the Issue Date of bonds of the Twenty-first Series having the same designated interest rate, interest payment dates and maturity shall be after a Record Date and prior to the corresponding interest payment date, such bonds shall bear interest from the Issue Date, but payment of interest shall commence on the second interest payment date succeeding the Issue Date, and (ii) interest payable on the maturity date will be payable to the person to whom the principal thereof shall be payable. "Record Date" for bonds of the Twenty-first Series having the same designated interest rate, interest payment dates and maturity shall mean (A) the date which shall be established prior to the date of first authentication of such bonds and set forth in such bonds, or (B) if no such date shall be established with respect to such bonds, the date 15 calendar days prior to any interest payment date for such bonds. "Issue Date" with respect to bonds of the Twenty-first Series having the same designated interest rate, interest payment dates and maturity shall mean (a) the date which shall be established prior to the date of first authentication of such bonds and set forth in such bonds, or (b) if no such date shall be established with respect to such bonds, the

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date of first authentication of such bonds. The principal of, and premium, if any, and interest on, each bond of the Twenty-first Series shall be payable at the office or agency of the Company in the Borough of Manhattan, The City of New York, in such coin or currency of the United States of America as at the time of payment is legal tender for public and private debts. Bonds of the Twenty-first Series shall be dated as in Section 10 of the Mortgage provided.

(I) Bonds of the Twenty-first Series shall be redeemable either at the option of the Company or pursuant to the requirements of the Mortgage, in whole at any time, or, if specified on the face of any bond of the Twenty-first Series, in part from time to time, prior to maturity, upon notice, as provided in Section 52 of the Mortgage, mailed at least thirty (30) days prior to the date fixed for redemption, as the Board of Directors may determine in accordance with a Resolution filed with the Corporate Trustee referring to this Twentieth Supplemental Indenture; provided, however, that bonds of the Twenty-first Series shall not be redeemable pursuant to Section 64 of the Mortgage.

(II) At the option of the registered owner, any bonds of the Twenty-first Series, upon surrender thereof, for cancellation, at the office or agency of the Company in the Borough of Manhattan, The City of New York, shall (subject to the provisions of Section 12 of the Mortgage) be exchangeable for a like aggregate principal amount of bonds of the same series of other authorized denominations which have the same Issue Date, maturity date, and redemption provisions, if any, and which bear interest at the same rate.

Transfers of bonds of the Twenty-first Series may be registered (subject to the provisions of Section 12 of the Mortgage) at the office or agency of the Company in the Borough of Manhattan, The City of New York.

Upon any registration of transfer or exchange of bonds of the Twenty-first Series, the Company may make a charge therefor sufficient to reimburse it for any tax or taxes or other governmental charge, as provided in Section 12 of the Mortgage, but the Company hereby waives any right to make a charge in addition thereto for any registration of exchange or transfer of bonds of the Twenty-first Series.

ARTICLE II.

Miscellaneous Provisions.

SECTION 2.0.1. Subject to the amendments provided for in this Twentieth Supplemental Indenture, the terms defined in the

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Mortgage, as heretofore supplemented, shall, for all purposes of this Twentieth Supplemental Indenture, have the meanings specified in the Mortgage, as heretofore supplemented.

SECTION 2.0.2. The holders of bonds of the Twenty-first Series consent that the Company may, but shall not be obligated to, fix a record date for the purpose of determining the holders of bonds of the Twenty-first Series entitled to consent to any amendment, supplement or waiver. If a record date is fixed, those persons who were holders at such record date (or their duly designated proxies), and only those persons, shall be entitled to consent to such amendment, supplement or waiver or to revoke any consent previously given, whether or not such persons continue to be holders after such record date. No such consent shall be valid or effective for more than 90 days after such record date.

SECTION 2.0.3. The Trustees hereby accept the trusts hereby declared, provided, created or supplemented, and agree to perform the same upon the terms and conditions herein and in the Mortgage, as heretofore supplemented, set forth, including the following:

The Trustees shall not be responsible in any manner whatsoever for or in respect of the validity or sufficiency of this Twentieth Supplemental Indenture or for or in respect of the recitals contained herein, all of which recitals are made by the Company solely. In general each and every term and condition contained in Article XVII of the Mortgage shall apply to and form part of this Twentieth Supplemental Indenture with the same force and effect as if the same were herein set forth in full, with such omissions, variations and insertions, if any, as may be appropriate to make the same conform to the provisions of this Twentieth Supplemental Indenture.

SECTION 2.0.4. Whenever in this Twentieth Supplemental Indenture any of the parties hereto is named or referred to, this shall, subject to the provisions of Articles XVI and XVII of the Mortgage, be deemed to include the successors or assigns of such party, and all the covenants and agreements in this Twentieth Supplemental Indenture contained by or on behalf of the Company or by or on behalf of the Trustees shall bind and inure to the benefit of the respective successors and assigns of such parties whether so expressed or not.

SECTION 2.0.5. Nothing in this Twentieth Supplemental Indenture, expressed or implied, is intended, or shall be construed, to confer upon, or to give to, any person, firm or corporation, other than the parties hereto and the holders of the bonds and coupons outstanding under the Mortgage, any right, remedy, or claim under or by reason of this Twentieth Supplemental

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Indenture or any covenant, condition, stipulation, promise or agreement hereof, and all the covenants, conditions, stipulations, promises and agreements by or on behalf of the Company as set forth in this Twentieth Supplemental Indenture shall be for the sole and exclusive benefit of the parties hereto, and of the holders of the bonds and of the coupons outstanding under the Mortgage.

SECTION 2.0.6. Except to the extent specifically provided herein, no provision of this Twentieth Supplemental Indenture is intended to reinstate any provisions in the Mortgage which were amended and superseded by the amendments to the Trust Indenture Act of 1939 effective as of November 15, 1990.

SECTION 2.0.7. This Twentieth Supplemental Indenture has been executed in several identical counterparts, each of which shall be an original and all of which shall constitute but one and the same instrument.

IN WITNESS WHEREOF, Northwest Natural Gas Company, party hereto of the first part, has caused its corporate name to be hereunto affixed, and this instrument to be signed and sealed by its President or one of its Vice Presidents, and its corporate seal to be attested by its Secretary or one of its Assistant Secretaries for and in its behalf on the 14th day of June, 1993, as of June 1, 1993, in Portland, Oregon; Bankers Trust Company, one of the parties hereto of the second part, has caused its corporate name to be hereunto affixed, and this instrument to be signed and sealed by one of its Vice Presidents or one of its Assistant Vice Presidents and its corporate seal to be attested by one of its Assistant Secretaries on the 14th day of June, 1993, as of June 1, 1993, in The City of New York; and Stanley Burg, one of the parties hereto of the second part, has hereunto set his hand and affixed his seal, in The City of New York, on the 14th day of June, 1993, as of June 1, 1993.

NORTHWEST NATURAL GAS COMPANY

By *Bruce R. Williams*
Senior Vice President and
Chief Financial Officer

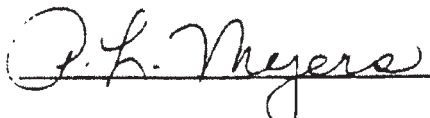
-14-

Attest:



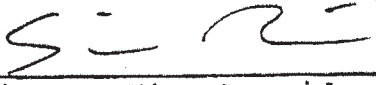
Secretary

Executed, sealed and delivered by
NORTHWEST NATURAL GAS COMPANY in
the presence of:



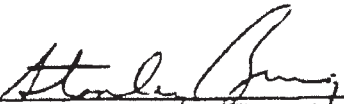


BANKERS TRUST COMPANY, as Trustee,

By 
Assistant Vice President

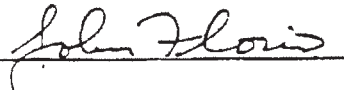
Attest:


Assistant Secretary


STANLEY BURG, as Trustee

Executed, sealed and
delivered by BANKERS TRUST
COMPANY and STANLEY BURG in
the presence of:


KENWYN HACKSHAW


JOHN FLORIO

STATE OF OREGON)
 : ss.:
COUNTY OF MULTNOMAH)

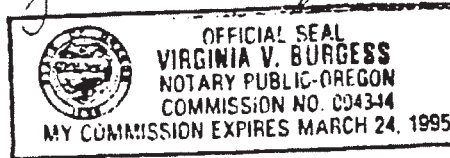
June 14, A.D. 1993.

Before me personally appeared BRUCE R. DEBOLT, who, being duly sworn, did say that he is Senior Vice President and Chief Financial Officer, of NORTHWEST NATURAL GAS COMPANY and that the seal affixed to the foregoing instrument is the corporate seal of said Corporation and that said instrument was signed and sealed in behalf of said Corporation by authority of its Board of Directors; and he acknowledged said instrument to be its voluntary act and deed.

On this 14th day of June, 1993, before me personally appeared BRUCE R. DEBOLT, to me known to be Senior Vice President and Chief Financial Officer of NORTHWEST NATURAL GAS COMPANY, one of the corporations that executed the within and foregoing instrument, and acknowledged said instrument to be the free and voluntary act and deed of said Corporation, for the uses and purposes therein mentioned, and on oath stated that he was authorized to execute said instrument and that the seal affixed is the corporate seal of said Corporation.

IN WITNESS WHEREOF I have hereunto set my hand and affixed my official seal the day and year first above written.

Virginia V. Burgess



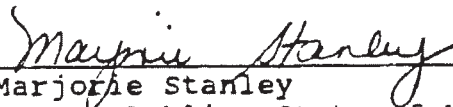
STATE OF NEW YORK)
 : ss.:
COUNTY OF NEW YORK)

June 14, A.D. 1993.

Before me personally appeared SAMIR PANDIRI, who, being duly sworn, did say that he is an Assistant Vice President of BANKERS TRUST COMPANY and that the seal affixed to the foregoing instrument is the corporate seal of said Corporation and that said instrument was signed and sealed in behalf of said Corporation by authority of its Board of Directors; and he acknowledged said instrument to be its voluntary act and deed.

On this 14th day of June, 1993, before me personally appeared SAMIR PANDIRI, to me known to be an Assistant Vice President of BANKERS TRUST COMPANY, one of the corporations that executed the within and foregoing instrument, and acknowledged said instrument to be the free and voluntary act and deed of said Corporation, for the uses and purposes therein mentioned, and on oath stated that he was authorized to execute said instrument and that the seal affixed is the corporate seal of said Corporation.

IN WITNESS WHEREOF I have hereunto set my hand and affixed my official seal the day and year first above written.



Marjorie Stanley
Notary Public, State of New York
No. 41-4986405
My Commission Expires 9/16/93

-18-


STATE OF NEW YORK)
 : SS.:
COUNTY OF NEW YORK)

June 14, A.D. 1993.

Before me personally appeared the above-named STANLEY BURG and acknowledged the foregoing instrument to be his voluntary act and deed.

On this day personally appeared before me STANLEY BURG to me known to be the individual described in and who executed the within and foregoing instrument, and acknowledged that he signed the same as his free and voluntary act and deed, for the uses and purposes therein mentioned.

Given under my hand and official seal this 14th day of June, 1993.



Marjorie Stanley
Notary Public, State of New York
No. 41-4986405
My Commission Expires 9/16/93

UG-
EX-4.1 2 d431686dex41.htm TWENTY -FIRST SUPPLEMENTAL INDENTURE

Exhibit 4.1

NORTHWEST NATURAL GAS COMPANY

TO

DEUTSCHE BANK TRUST COMPANY AMERICAS
(FORMERLY KNOWN AS BANKERS TRUST COMPANY)

AND

STANLEY BURG (SUCCESSOR TO R. G. PAGE AND J. C. KENNEDY),

As Trustees under the Mortgage and Deed of Trust, dated
as of July 1, 1946, of Portland Gas & Coke
Company (now Northwest Natural Gas Company)

TWENTY-FIRST SUPPLEMENTAL INDENTURE
PROVIDING, AMONG OTHER THINGS, FOR
FIRST MORTGAGE BONDS, 4.00% SERIES DUE 2042

DATED AS OF OCTOBER 15, 2012

TWENTY-FIRST SUPPLEMENTAL INDENTURE

INDENTURE, dated as of the 15th day of October, 2012, made and entered into by and between NORTHWEST NATURAL GAS COMPANY (formerly Portland Gas & Coke Company), an Oregon corporation, with offices at One Pacific Square, 220 N.W. Second Avenue, Portland, Oregon 97209 (hereinafter sometimes called the Company), and DEUTSCHE BANK TRUST COMPANY AMERICAS (formerly known as BANKERS TRUST COMPANY), a New York corporation, with offices at 60 Wall Street, 27th Floor, New York, New York 10005 (hereinafter sometimes called the Corporate Trustee) and STANLEY BURG (successor to R. G. PAGE and J. C. KENNEDY), with offices at c/o Deutsche Bank Trust Company Americas, 60 Wall Street, New York, New York 10005 (hereinafter sometimes called the Co-Trustee) (the Corporate Trustee and the Co-Trustee together sometimes called the Trustees), as Trustees under the Mortgage and Deed of Trust, dated as of July 1, 1946 (hereinafter called the Mortgage), executed and delivered by Portland Gas & Coke Company (now Northwest Natural Gas Company) to secure the payment of bonds issued or to be issued under and in accordance with the provisions of the Mortgage, this indenture (hereinafter called Twenty-first Supplemental Indenture) being supplemental thereto;

WHEREAS the Mortgage was or is to be recorded in the official records of various counties in the States of Oregon and Washington which counties include or will include all counties in which this Twenty-first Supplemental Indenture is to be recorded; and

WHEREAS by the Mortgage the Company covenanted that it would execute and deliver such supplemental indenture or indentures and such further instruments and do such further acts as might be necessary or proper to carry out more effectually the purposes of the Mortgage and to make subject to the lien of the Mortgage any property thereafter acquired, made or constructed and intended to be subject to the lien thereof; and

WHEREAS the Company executed and delivered to the Trustees its First Supplemental Indenture, dated as of June 1, 1949 (hereinafter called its First Supplemental Indenture), its Second Supplemental Indenture, dated as of March 1, 1954 (hereinafter called its Second Supplemental Indenture), its Third Supplemental Indenture, dated as of April 1, 1956 (hereinafter called its Third Supplemental Indenture), its Fourth Supplemental Indenture, dated as of February 1, 1959 (hereinafter called its Fourth Supplemental Indenture), its Fifth Supplemental Indenture, dated as of July 1, 1961 (hereinafter called its Fifth Supplemental Indenture), its Sixth Supplemental Indenture, dated as of January 1, 1964 (hereinafter called its Sixth Supplemental Indenture), its Seventh Supplemental Indenture, dated as of March 1, 1966 (hereinafter called its Seventh Supplemental Indenture), its Eighth Supplemental Indenture, dated as of December 1, 1969 (hereinafter called its Eighth Supplemental Indenture), its Ninth Supplemental Indenture, dated as of April 1, 1971 (hereinafter called its Ninth

Supplemental Indenture), its Tenth Supplemental Indenture, dated as of January 1, 1975 (hereinafter called its Tenth Supplemental Indenture), its Eleventh Supplemental Indenture, dated as of December 1, 1975 (hereinafter called its Eleventh Supplemental Indenture), its Twelfth Supplemental Indenture, dated as of July 1, 1981 (hereinafter called its Twelfth Supplemental Indenture), its Thirteenth Supplemental Indenture, dated as of June 1, 1985 (hereinafter called its Thirteenth Supplemental Indenture), its Fourteenth Supplemental Indenture, dated as of November 1, 1985 (hereinafter called its Fourteenth Supplemental Indenture), its Fifteenth Supplemental Indenture, dated as of July 1, 1986 (hereinafter called its Fifteenth Supplemental Indenture), its Sixteenth Supplemental Indenture, dated as of November 1, 1988 (hereinafter called its Sixteenth Supplemental Indenture), its Seventeenth Supplemental Indenture, dated as of October 1, 1989 (hereinafter called its Seventeenth Supplemental Indenture), its Eighteenth Supplemental Indenture, dated as of July 1, 1990 (hereinafter called its Eighteenth Supplemental Indenture), and its Nineteenth Supplemental Indenture, dated as of June 1, 1991 (hereinafter called its Nineteenth Supplemental Indenture); and

WHEREAS the First through Nineteenth Supplemental Indentures were filed for record, and were recorded and indexed, as a mortgage of both real and personal property, in the official records of various counties in the States of Oregon and Washington which counties include or will include all counties in which this Twenty-first Supplemental Indenture is to be recorded; and

WHEREAS the Company executed and delivered to the Trustees its Twentieth Supplemental Indenture, dated as of June 1, 1993 (hereinafter called its Twentieth Supplemental Indenture); and

WHEREAS said Twentieth Supplemental Indenture was filed for record, and was recorded and indexed, as a mortgage of both real and personal property, and financing statements were filed, in the official records of the several counties and other offices in the States of Oregon and Washington listed below, as follows:

IN THE STATE OF OREGON

Real Property Mortgage Records

<u>No.</u>	<u>County</u>	<u>Date Recorded</u>	<u>Book, Film or Reel</u>	<u>Page</u>
11	Benton	June 23, 1993	M-166017-93	-
		June 29, 1993 (re-recorded)	M-166297-93	-
12	Clackamas	June 22, 1993	93-43287	-
13	Clatsop	June 23, 1993	816	534
14	Columbia	June 23, 1993	93-5185	-
15	Coos	June 30, 1993	93061396	-
32	Douglas	June 24, 1993	1241	840
17	Hood River	June 23, 1993	932082	-
18	Lane	June 23, 1993	9338274	-
19	Lincoln	June 23, 1993	263	1293
20	Linn	June 23, 1993	645	804
21	Marion	June 24, 1993	1074	290
22	Multnomah	June 23, 1993	2711	1885
23	Polk	June 25, 1993	270	245
24	Tillamook	June 23, 1993	351	718
25	Wasco	June 23, 1993	932338	-
26	Washington	June 23, 1993	93049394	-
27	Yamhill	June 23, 1993	F288P1700	-

Filed as a Financing Statement

<u>No.</u>	<u>Office</u>	<u>Date Filed for Record</u>	<u>File No.</u>
9	Secretary of State	June 23, 1993	R61325

IN THE STATE OF WASHINGTON

Real Property Mortgage Records

<u>No.</u>	<u>County</u>	<u>Date Recorded</u>	<u>Book, Film or Reel</u>	<u>Page</u>
29	Clark	June 24, 1993	399	1
30	Klickitat	June 23, 1993	297	650
31	Skamania	June 24, 1993	136	172

Filed as a Financing Statement

<u>No.</u>	<u>Office</u>	<u>Date Filed for Record</u>	<u>File No.</u>
28	Secretary of State	June 25, 1993	93-176-0202

WHEREAS an instrument dated as of June 14, 1951, was executed by the Company appointing J. C. KENNEDY as Co-Trustee in succession to said R. G. PAGE (resigned) under the Mortgage and by J. C. KENNEDY accepting the appointment as Co-Trustee under the Mortgage in succession to R. G. PAGE, which instrument was recorded in various counties in the States of Oregon and Washington; and

WHEREAS, in the Ninth Supplemental Indenture STANLEY BURG was appointed by the Company as Co-Trustee under the Mortgage in succession to J. C. KENNEDY (resigned) and in the Ninth Supplemental Indenture STANLEY BURG accepted such appointment as Co-Trustee under the Mortgage in succession to J. C. KENNEDY; and

WHEREAS in addition to the property described in the Mortgage, as heretofore supplemented, the Company has acquired certain other property, rights and interests in property; and

WHEREAS, the Company has heretofore issued, in accordance with the provisions of the Mortgage, as supplemented, and on the date hereof there remain outstanding, the following series of First Mortgage Bonds:

<u>Series</u>	<u>Principal Amount Outstanding</u>
Secured Medium-Term Notes, Series A	\$ 10,000,000
Secured Medium-Term Notes, Series B	\$ 591,700,000

; and

WHEREAS Section 8 of the Mortgage provides that the form of each series of bonds (other than the First Series) issued thereunder shall be established by Resolution of the Board of Directors of the Company; that the form of such series, as established by the Board of Directors, shall specify the descriptive title of the bonds and various other terms thereof; and that such Series may also contain such provisions not inconsistent with the provisions of the Mortgage as the Board of Directors may, in its discretion, cause to be inserted therein expressing or referring to the terms and conditions upon which such bonds are to be issued and/or secured under the Mortgage; and

WHEREAS Section 120 of the Mortgage provides, among other things, that any power, privilege or right expressly or impliedly reserved to or in any way conferred upon the Company by any provision of the Mortgage, whether such power, privilege or right is in any way restricted or is unrestricted, may (to the extent permitted by law) be in whole or in part waived or surrendered or subjected to any restriction if at the time unrestricted or to additional restriction if already restricted, and the Company may enter into any further covenants, limitations or restrictions for the benefit of any one or more series of bonds issued thereunder, or the Company may cure any ambiguity contained therein or in any supplemental indenture or may (in lieu of establishment by Resolution as provided in Section 8 of the Mortgage) establish the terms and provisions of any series of bonds other than said First Series, by an instrument in writing executed and acknowledged by the

Company in such manner as would be necessary to entitle a conveyance of real estate to record in all of the states in which any property at the time subject to the lien of the Mortgage shall be situated; and

WHEREAS the Company now desires to create a new series of bonds and (pursuant to the provisions of Section 120 of the Mortgage) to add to its covenants and agreements contained in the Mortgage, as heretofore supplemented, certain other covenants and agreements to be observed by it and to alter and amend in certain respects the covenants and provisions contained in the Mortgage, as heretofore supplemented and amended; and

WHEREAS the execution and delivery by the Company of this Twenty-first Supplemental Indenture, and the terms of the bonds of the Twenty-second Series hereinafter referred to, have been duly authorized by the Board of Directors of the Company by appropriate resolutions of the Board of Directors;

NOW, THEREFORE, THIS INDENTURE WITNESSETH:

That Northwest Natural Gas Company, in consideration of the above premises and such other valuable consideration, the receipt and sufficiency whereof is hereby acknowledged, and in further assurance of the estate, title and rights of the Trustees, and in order further to secure the payment both of the principal of and interest and premium, if any, on the bonds from time to time issued under the Mortgage, according to their tenor and effect, and the performance of all the provisions of the Mortgage (including any instruments supplemental thereto and any modification made as in the Mortgage provided) and of said bonds, hereby grants, bargains, sells, releases, conveys, assigns, transfers, mortgages, pledges, sets over and confirms (subject, however, to Excepted Encumbrances, as defined in Section 6 of the Mortgage) unto Stanley Burg and (to the extent of its legal capacity to hold the same for the purposes hereof) to Deutsche Bank Trust Company Americas, as Trustees under the Mortgage, and to their successor or successors in said trust, and to said Trustees and their successors and assigns forever, all property, real, personal and mixed, acquired by the Company after the date of the Mortgage, of the kind or nature specifically mentioned in Article XXI of the Mortgage or of any other kind or nature (except any herein or in the Mortgage expressly excepted) now owned or, subject to the provisions of subsection (I) of Section 87 of the Mortgage, hereafter acquired by the Company (by purchase, consolidation, merger, donation, construction, erection or in any other way) and wheresoever situated, including (without in anywise limiting or impairing by the enumeration of the same the scope and intent of the foregoing) all lands, gas plants, by-product plants, gas holders, gas mains and pipes; all power sites, water rights, reservoirs, canals, raceways, dams, aqueducts, and all other rights or means for appropriating, conveying, storing and supplying water; all rights of way and roads; all plants for the generation of electricity by steam, water and/or other power; all power houses, street lighting systems, standards and other equipment incidental thereto, telephone, radio, television and air-conditioning systems and

equipment incidental thereto, water works, water systems, steam heat and hot water plants, substations, lines, service and supply systems, bridges, culverts, tracts, ice or refrigeration plants and equipment, offices, buildings and other structures and the equipment thereof; all machinery, engines, boilers, dynamos, gas, electric and other machines, regulators, meters, transformers, generators, motors, gas, electrical and mechanical appliances, conduits, cables, gas, water, steam heat or other pipes, service pipes, fittings, valves and connections, pole and transmission lines, wires, cables, tools, implements, apparatus, furniture and chattels; all franchises, consents or permits; all lines for the transmission and distribution of gas, electric current, steam heat or water for any purpose including mains, pipes, conduits, towers, poles, wires, cables, ducts and all apparatus for use in connection therewith; all real estate, lands, easements, servitudes, licenses, permits, franchises, privileges, rights of way and other rights in or relating to public or private property, real or personal, or the occupancy of such property and (except as herein or in the Mortgage, as heretofore supplemented, expressly excepted) all right, title and interest the Company may now have or may hereafter acquire in and to any and all property of any kind or nature wheresoever situated.

TOGETHER WITH all and singular the tenements, hereditaments, prescriptions, servitudes and appurtenances belonging or in anywise appertaining to the aforementioned property or any part thereof, with the reversion and reversions, remainder and remainders and (subject to the provisions of Section 57 of the Mortgage) the tolls, rents, revenues, issues, earnings, income, product and profits thereof, and all the estate, right, title and interest and claim whatsoever, at law as well as in equity, which the Company now has or may hereafter acquire in and to the aforementioned property and franchises and every part and parcel thereof.

IT IS HEREBY AGREED by the Company that, subject to the provisions of subsection (I) of Section 87 of the Mortgage, all the property, rights, and franchises acquired by the Company (by purchase, consolidation, merger, donation, construction, erection or in any other way) after the date hereof, except any herein or in the Mortgage, as heretofore supplemented, expressly excepted, shall be and are as fully granted and conveyed hereby and by the Mortgage, and as fully embraced within the lien hereof and the lien of the Mortgage, as supplemented, as if such property, rights and franchises were now owned by the Company and were specifically described herein or in the Mortgage, as heretofore supplemented, and conveyed hereby or thereby. Provided that the following are not and are not intended to be now or hereafter granted, bargained, sold, released, conveyed, assigned, transferred, mortgaged, pledged, set over or confirmed hereunder and are hereby expressly excepted from the lien and operation of this Twenty-first Supplemental Indenture and from the lien and operation of the Mortgage, as heretofore supplemented, viz: (1) cash, shares of stock, bonds, notes and other obligations and other securities not hereafter specifically pledged, paid, deposited, delivered or held under the Mortgage, as heretofore supplemented, or covenanted so to be; (2) merchandise, equipment, apparatus, materials or supplies held for the purpose of sale or other disposition in the usual course of business; fuel, oil and similar materials and supplies

consumable in the operation of any of the properties of the Company; all aircraft, tractors, rolling stock, trolley coaches, buses, motor coaches, automobiles, motor trucks, and other vehicles and materials and supplies held for the purpose of repairing or replacing (in whole or in part) any of the same; (3) bills, notes and accounts receivable, judgments, demands and choses in action, and all contracts, leases and operating agreements not specifically pledged under the Mortgage, as heretofore supplemented, or covenanted so to be; (4) the last day of the term of any lease or leasehold which may be or become subject to the lien of the Mortgage; (5) gas, petroleum, carbon, chemicals, light oils, tar products, electric energy, steam, water, ice, and other materials or products, manufactured, stored, generated, produced, purchased or acquired by the Company for sale, distribution or use in the ordinary course of its business; all timber, minerals, mineral rights and royalties and all Natural Gas and Oil Production Property, as defined in Section 4 of the Mortgage; and (6) the Company's franchise to be a corporation; provided, however, that the property and rights expressly excepted from the lien and operation of this Twenty-first Supplemental Indenture and from the lien and operation of the Mortgage, as heretofore supplemented, in the above subdivisions (2) and (3) shall (to the extent permitted by law) cease to be so excepted in the event and as of the date that either or both of the Trustees or a receiver or trustee shall enter upon and take possession of the Mortgaged and Pledged Property in the manner provided in Article XIII of the Mortgage by reason of the occurrence of a Default as defined in Section 65 thereof.

TO HAVE AND TO HOLD all such properties, real, personal and mixed, granted, bargained, sold, released, conveyed, assigned, transferred, mortgaged, pledged, set over or confirmed by the Company as aforesaid, or intended so to be, unto Stanley Burg and (to the extent of its legal capacity to hold the same for the purposes hereof) to Deutsche Bank Trust Company Americas, as Trustees, and their successors and assigns forever.

IN TRUST NEVERTHELESS, for the same purposes and upon the same terms, trusts and conditions and subject to and with the same provisos and covenants as are set forth in the Mortgage, as heretofore supplemented, this Twenty-first Supplemental Indenture being supplemental thereto.

AND IT IS HEREBY COVENANTED by the Company that all the terms, conditions, provisos, covenants and provisions contained in the Mortgage, as heretofore supplemented, shall affect and apply to the property hereinbefore described and conveyed, and to the estates, rights, obligations and duties of the Company and the Trustees and the beneficiaries of the trust with respect to said property, and to the Trustees and their successors in the trust, in the same manner and with the same effect as if the said property had been owned by the Company at the time of the execution of the Mortgage, and had been specifically and at length described in and conveyed to said Trustees by the Mortgage as a part of the property therein stated to be conveyed.

The Company further covenants and agrees to and with the Trustees and their successors in said trust under the Mortgage, as follows:

ARTICLE I.

Twenty-second Series of Bonds.

SECTION 1.01 There shall be a series of bonds designated “4.00% Series due 2042” (herein sometimes referred to as the “Twenty-second Series”), each of which shall also bear the descriptive title “First Mortgage Bond”, and the form thereof attached hereto as Exhibit A, as established by Resolution of the Board of Directors of the Company and shall contain suitable provisions with respect to the matters hereinafter in this Article I specified. Bonds of the Twenty-second Series shall be issued from time to time as fully registered bonds in denominations of One Hundred Thousand Dollars and, at the option of the Company, in any multiple or multiples of One Thousand Dollars (the exercise of such option to be evidenced by the execution and delivery thereof). Bonds of the Twenty-second Series shall mature on October 31, 2042 (the “Stated Maturity”) and bear interest at the rate of 4.00% per annum, payable semi-annually on February 1 and August 1 of each year, commencing February 1, 2013; and the principal of, and premium, if any, and, unless otherwise agreed between the Company and the registered owner of any bonds of the Twenty-second Series registered in the name of such registered owner, interest on, each such bond shall be payable at the office or agency of the Company in the Borough of Manhattan, The City of New York or as otherwise provided in the form of bond of the Twenty-second Series, in such coin or currency of the United States of America as at the time of payment is legal tender for public and private debts. Bonds of the Twenty-second Series shall be dated as in Section 10 of the Mortgage provided.

The bonds of the Twenty-second Series shall be payable and have and be subject to such other terms as provided in the form of bond of the Twenty-second Series established by the Board of Directors in a Resolution filed with the Corporate Trustee referring to the Twenty-second Series and shall have and be subject to such other terms as are provided in the Mortgage.

All references in the Mortgage to the principal amount of bonds shall, when used with respect to the bonds of the Twenty-second Series, mean the unpaid principal amount thereof, except that, (a) for the purposes of transfers of fully registered bonds under Section 13 of the Mortgage, the term “like principal amount” shall, when used with respect to the bonds of the Twenty-second Series, mean “like aggregate unpaid principal amount”, and (b) for the purposes of exchanges of temporary bonds under Section 15 of the Mortgage, the term “like aggregate principal amount” shall, when used with respect to the bonds of the Twenty-second Series, mean “like aggregate unpaid principal amount”.

(I) Optional Redemption. At any time prior to April 30, 2042 (six months prior to the Stated Maturity), the Company may, at its option, upon notice as provided below, redeem at any time all, or from time to time any part of, the bonds of the Twenty-second Series at 100% of the principal amount so redeemed, and the Make-Whole Amount determined for the Settlement Date specified by the Company in such notice with respect to such principal amount. The Company will give each registered owner of bonds of the Twenty-second Series written notice (by first class mail or such other method as may be agreed upon by the Company and such registered owner) of each optional redemption under this subsection (I) mailed or otherwise given not less than 30 days and not more than 60 days prior to the date fixed for such redemption, to each such registered owner at his, her or its last address appearing on the bond register. Each such notice shall specify the Settlement Date (which shall be a Business Day), the aggregate principal amount of the bonds of the Twenty-second Series to be redeemed on such date, the principal amount of each bond held by such registered owner to be redeemed (determined in accordance with subsection (II) of this section), and the interest to be paid on the Settlement Date with respect to such principal amount being redeemed, and shall be accompanied by a certificate signed by a Senior Financial Officer as to the estimated Make-Whole Amount due in connection with such redemption (calculated as if the date of such notice were the date of the redemption), setting forth the details of such computation. Two Business Days prior to such Settlement Date, the Company shall send to each registered owner of bonds of the Twenty-second Series (by first class mail or by such other method as may be agreed upon by the Company and such registered owner) a certificate signed by a Senior Financial Officer specifying the calculation of such Make-Whole Amount as of the specified Settlement Date. As promptly as practicable after the giving of the notice and the sending of the certificates provided in this subsection, the Company shall provide a copy of each to the Corporate Trustee. The Trustees shall be under no duty to inquire into, may conclusively presume the correctness of, and shall be fully protected in relying upon the information set forth in any such notice or certificate.

At any time on or after April 30, 2042, the bonds of the Twenty-second Series will be redeemable at the option of the Company, in whole or in part, on not less than 30 nor more than 60 days' notice prior to the Settlement Date, at a redemption price equal to 100% of the principal amount of the bonds of the Twenty-second Series to be redeemed, plus accrued and unpaid interest thereon to the Settlement Date. The bonds of the Twenty-second Series are not otherwise subject to voluntary or optional redemption.

(II) Allocation of Partial Redemptions. In the case of each partial redemption of the bonds of the Twenty-second Series, the principal amount of the bonds of the Twenty-second Series to be redeemed shall be allocated by the Company among all of the bonds of the Twenty-second Series at the time outstanding in proportion, as nearly as practicable, to the respective unpaid principal amounts thereof not theretofore called for redemption.

(III) Maturity; Surrender, Etc. In the case of each notice of redemption of bonds of the Twenty-second Series pursuant to this section, if cash sufficient to pay the principal amount to be redeemed on the Settlement Date (which shall be a Business Day), together with interest on such principal amount accrued to such date and the applicable Make-Whole Amount, if any, is not paid as agreed upon by the Company and each registered owner of the affected bonds, or, to the extent that there is no such agreement entered into with one or more such owners, deposited with the Corporate Trustee on or before the Settlement Date, then such notice of redemption shall be of no effect. If such cash is so paid or deposited, such principal amount of the bonds of the Twenty-second Series shall be deemed paid for all purposes and interest on such principal amount shall cease to accrue. In case the Company pays any registered owner pursuant to an agreement with that registered owner, whether in the case of redemption or at maturity or otherwise, the Company shall notify the Corporate Trustee as promptly as practicable of such agreement and payment, and shall furnish the Corporate Trustee with a copy of such agreement and evidence of such payment, which may include a confirmation of wire transfer or other credit to an account designated by the registered owner, cancelled check or a receipt signed by the registered owner; in case the Company deposits any cash with the Corporate Trustee, the Company shall provide therewith a list of the registered owners and the amount of such cash each registered owner is to receive. The Trustees shall be under no duty to inquire into, may conclusively presume the correctness of, and shall be fully protected in relying upon the information set forth in any such notice, evidence of payment, list or agreement, and shall not be chargeable with knowledge of any of the contents of any such agreement. Any bond redeemed in full shall be surrendered to the Company or the Corporate Trustee for cancellation on or before the Settlement Date (unless otherwise agreed between the Company and the registered owner) or, with respect to cash deposited with the Corporate Trustee, before payment of such cash by the Corporate Trustee; any bond redeemed in part shall be surrendered to the Company or the Corporate Trustee on or before the Settlement Date (unless otherwise agreed between the Company and the registered owner) or, with respect to cash deposited with the Corporate Trustee before payment of such cash by the Corporate Trustee, for a substitute bond in the principal amount remaining unpaid.

(IV) Make-Whole Amount.

“Make-Whole Amount” means, with respect to any bond of the Twenty-second Series, an amount equal to the excess, if any, of the Discounted Value of the Remaining Scheduled Payments with respect to the Called Principal of such bond of the Twenty-second Series over the amount of such Called Principal, provided that the Make-Whole Amount may in no event be less than zero. For the purposes of determining the Make-Whole Amount, the following terms have the following meanings:

“Business Day” means any day other than a Saturday, a Sunday or a day on which commercial banks in New York City are required or authorized to be closed.

“Called Principal” means, with respect to any bond of the Twenty-second Series, the principal of such bond that is to be redeemed pursuant to subsection (I) of this section.

“Discounted Value” means, with respect to the Called Principal of any bond of the Twenty-second Series, the amount obtained by discounting all Remaining Scheduled Payments with respect to such Called Principal from their respective scheduled due dates to the Settlement Date with respect to such Called Principal, in accordance with accepted financial practice and at a discount factor (applied on the same periodic basis as that on which interest on the bonds of the Twenty-second Series is payable) equal to the Reinvestment Yield with respect to such Called Principal.

“Reinvestment Yield” means, with respect to the Called Principal of any bond of the Twenty-second Series, 0.50% (50 basis points) over the yield to maturity implied by (i) the yields reported as of 10:00 a.m. (New York City time) on the second Business Day preceding the Settlement Date with respect to such Called Principal, on the display designated as “Page PX1” on the Bloomberg Financial Markets Service (or such other display on the Bloomberg Financial Markets Service having the same information as PX1 if PX1 is replaced by the Bloomberg Financial Markets Service) for the most recently issued actively traded on-the-run benchmark U.S. Treasury securities having a maturity equal to the Remaining Average Life of such Called Principal as of such Settlement Date, or (ii) if such yields are not reported as of such time or the yields reported as of such time are not ascertainable (including by way of interpolation), the treasury constant maturity series yields reported, for the latest day for which such yields have been so reported as of the second Business Day preceding the Settlement Date with respect to such Called Principal, in Federal Reserve Statistical Release H.15 (519) (or any comparable successor publication) for actively traded U.S. Treasury securities having a constant maturity equal to the Remaining Average Life of such Called Principal as of such Settlement Date. Such implied yield will be determined, if necessary, by (a) converting U.S. Treasury bill quotations to bond equivalent yields in accordance with accepted financial practice and (b) interpolating linearly between (1) the most recently issued, actively traded on-the-run benchmark U.S. Treasury security with the maturity closest to and greater than such Remaining Average Life and (2) the most recently issued, actively traded on-the-run benchmark U.S. Treasury security with the maturity closest to and less than such Remaining Average Life. The Reinvestment Yield shall be rounded to the number of decimal places as appears in the interest rate of the applicable bond of the Twenty-second Series.

“Remaining Average Life” means, with respect to any Called Principal, the number of years (calculated to the nearest one-twelfth year) obtained by dividing (i) such Called Principal into (ii) the sum of the products obtained by multiplying (a) the principal component of each Remaining Scheduled Payment with respect to such Called Principal by (b) the number of years (calculated to the nearest one-twelfth year) that will elapse between the Settlement Date with respect to such Called Principal and the scheduled due date of such Remaining Scheduled Payment.

“Remaining Scheduled Payments” means, with respect to the Called Principal of any bond of the Twenty-second Series, all payments of such Called Principal and interest thereon that would be due after the Settlement Date with respect to such Called Principal if no payment of such Called Principal were made prior to its scheduled due date, provided that if such Settlement Date is not a date on which interest payments are due to be made under the terms of the bonds of the Twenty-second Series, then the amount of the next succeeding scheduled interest payment will be reduced by the amount of interest accrued to such Settlement Date and required to be paid on such Settlement Date pursuant to subsection (I) of this section.

“Settlement Date” means, with respect to the Called Principal of any bond of the Twenty-second Series, the date on which such Called Principal is to be redeemed pursuant to subsection (I) of this section.

“Senior Financial Officer” means the chief financial officer, principal accounting officer, treasurer or controller of the Company.

(V) Exchanges and Transfers. At the option of the registered owner, any bonds of the Twenty-second Series, upon surrender thereof, for cancellation, at the office or agency of the Company in the Borough of Manhattan, The City of New York, together with a written instrument of transfer whenever required by the Company duly executed by the registered owner or by his duly authorized attorney, shall (subject to the provisions of Section 12 of the Mortgage) be exchangeable for a like aggregate unpaid principal amount of bonds of the same series of other authorized denominations.

Transfers of bonds of the Twenty-second Series may be registered (subject to the provisions of Section 12 of the Mortgage) at the office or agency of the Company in the Borough of Manhattan, The City of New York.

Upon any registration of transfer or exchange of bonds of the Twenty-second Series, the Company may make a charge therefor sufficient to reimburse it for any tax or taxes or other governmental charge, as provided in Section 12 of the Mortgage, but the Company hereby waives any right to make a charge in addition thereto for any registration of exchange or transfer of bonds of the Twenty-second Series.

ARTICLE II.

Miscellaneous Provisions.

SECTION 2.01 Subject to the amendments provided for in this Twenty-first Supplemental Indenture, the terms defined in the Mortgage, as heretofore supplemented, shall, for all purposes of this Twenty-first Supplemental Indenture, have the meanings specified in the Mortgage, as heretofore supplemented.

SECTION 2.02 The holders of bonds of the Twenty-second Series consent that the Company may, but shall not be obligated to, fix a record date for the purpose of determining the holders of bonds of the Twenty-second Series entitled to consent to any amendment, supplement or waiver. If a record date is fixed, those persons who were holders at such record date (or their duly designated proxies), and only those persons, shall be entitled to consent to such amendment, supplement or waiver or to revoke any consent previously given, whether or not such persons continue to be holders after such record date. No such consent shall be valid or effective for more than 90 days after such record date.

SECTION 2.03 The Trustees hereby accept the trusts hereby declared, provided, created or supplemented, and agree to perform the same upon the terms and conditions herein and in the Mortgage, as heretofore supplemented, set forth, including the following:

The Trustees shall not be responsible in any manner whatsoever for or in respect of the validity or sufficiency of this Twenty-first Supplemental Indenture or for or in respect of the recitals contained herein, all of which recitals are made by the Company solely. In general each and every term and condition contained in Article XVII of the Mortgage shall apply to and form part of this Twenty-first Supplemental Indenture with the same force and effect as if the same were herein set forth in full, with such omissions, variations and insertions, if any, as may be appropriate to make the same conform to the provisions of this Twenty-first Supplemental Indenture.

SECTION 2.04 Whenever in this Twenty-first Supplemental Indenture any of the parties hereto is named or referred to, this shall, subject to the provisions of Articles XVI and XVII of the Mortgage, be deemed to include the successors or assigns of such party, and all the covenants and agreements in this Twenty-first Supplemental Indenture contained by or on behalf of the Company or by or on behalf of the Trustees shall bind and inure to the benefit of the respective successors and assigns of such parties whether so expressed or not.

SECTION 2.05 Nothing in this Twenty-first Supplemental Indenture, expressed or implied, is intended, or shall be construed, to confer upon, or to give to, any person, firm or corporation, other than the parties hereto and the holders of the bonds and

coupons outstanding under the Mortgage, any right, remedy, or claim under or by reason of this Twenty-first Supplemental Indenture or any covenant, condition, stipulation, promise or agreement hereof, and all the covenants, conditions, stipulations, promises and agreements by or on behalf of the Company as set forth in this Twenty-first Supplemental Indenture shall be for the sole and exclusive benefit of the parties hereto, and of the holders of the bonds and of the coupons outstanding under the Mortgage.

SECTION 2.06 Except to the extent specifically provided herein, no provision of this Twenty-first Supplemental Indenture is intended to reinstate any provisions in the Mortgage which were amended and superseded by the amendments to the Trust Indenture Act of 1939 effective as of November 15, 1990.

SECTION 2.07 This Twenty-first Supplemental Indenture has been executed in several identical counterparts, each of which shall be an original and all of which shall constitute but one and the same instrument.

STATE OF OREGON)
 : ss.:
COUNTY OF MULTNOMAH)

October 24, A.D. 2012.

Before me personally appeared David H. Anderson, who, being duly sworn, did say that he is the Senior Vice President and Chief Financial Officer, of NORTHWEST NATURAL GAS COMPANY and that the seal affixed to the foregoing instrument is the corporate seal of said Corporation and that said instrument was signed and sealed in behalf of said Corporation by authority of its Board of Directors; and he acknowledged said instrument to be its voluntary act and deed.

On this 24th day of October, 2012, before me personally appeared David H. Anderson, to me known to be the Senior Vice President and Chief Financial Officer of NORTHWEST NATURAL GAS COMPANY, one of the corporations that executed the within and foregoing instrument, and acknowledged said instrument to be the free and voluntary act and deed of said Corporation, for the uses and purposes therein mentioned, and on oath stated that he was authorized to execute said instrument and that the seal affixed is the corporate seal of said Corporation.

IN WITNESS WHEREOF I have hereunto set my hand and affixed my official seal the day and year first above written.

/s/ Pamela L. Villaloboz
Notary Public—Oregon
Commission No. 453759
My Commission Expires 12/23/14

STATE OF NEW YORK)
 : ss.:
COUNTY OF NEW YORK)

October 25th, A.D. 2012.

Before me personally appeared Carol Ng, who, being duly sworn, did say that [he/she] is a Vice President of DEUTSCHE BANK TRUST COMPANY AMERICAS and that the seal affixed to the foregoing instrument is the corporate seal of said Corporation and that said instrument was signed and sealed in behalf of said Corporation by authority of its Board of Directors; and [he/she] acknowledged said instrument to be its voluntary act and deed.

On this 25th day of October, 2012, before me personally appeared Carol Ng, David Contino and Renee Cummins, to me known to be, respectively, a Vice President, a Vice President and Associate of DEUTSCHE BANK TRUST COMPANY AMERICAS, one of the corporations that executed the within and foregoing instrument, and acknowledged said instrument to be the free and voluntary act and deed of said Corporation, for the uses and purposes therein mentioned, and on oath stated that they were authorized to execute said instrument and that the seal affixed is the corporate seal of said Corporation.

IN WITNESS WHEREOF I have hereunto set my hand and affixed my official seal the day and year first above written.

/s/ Teddy Banica

Teddy Banica
Notary Public, State of New York
No. 01BA6266801
Qualified in New York County
Commission Expires August 6, 2016

STATE OF NEW YORK)
 : ss.:
COUNTY OF NEW YORK)

October 24, 2012

Before me personally appeared the above-named STANLEY BURG and acknowledged the foregoing instrument to be his voluntary act and deed.

On this day personally appeared before me STANLEY BURG to me known to be the individual described in and who executed the within and foregoing instrument, and acknowledged that he signed the same as his free and voluntary act and deed, for the uses and purposes therein mentioned.

Given under my hand and official seal this 24 day of October, 2012.

/a/ Annie V. Jaghatspanyan
Annie V. Jaghatspanyan
Notary Public, State of New Jersey
I.D. #2421080
My Commission Expires 5/21/2017

EXHIBIT A TO SUPPLEMENTAL INDENTURE

THIS BOND HAS NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED, OR THE SECURITIES OR "BLUE SKY" LAWS OF ANY OTHER JURISDICTION, AND MAY BE TRANSFERRED ONLY IN COMPLIANCE WITH SUCH REGISTRATION REQUIREMENTS OR UNDER AN EXEMPTION THEREFROM.

IF AGREED BETWEEN THE COMPANY AND THE REGISTERED OWNER OF THIS BOND, THE PRINCIPAL OF THIS BOND MAY BE REDEEMED IN WHOLE OR IN PART WITHOUT SURRENDER OF THIS BOND OR NOTATION ON THIS BOND OF SUCH REDEMPTION. ANY PURCHASER OF THIS BOND, BY ACCEPTANCE HEREOF, AGREES THAT THE UNPAID PRINCIPAL AMOUNT AS OF ANY DATE MAY BE LESS THAN THE PRINCIPAL AMOUNT SHOWN ON THIS BOND. CONFIRMATION OF THE UNPAID PRINCIPAL AMOUNT OF THIS BOND MAY BE OBTAINED FROM THE COMPANY OR THE CORPORATE TRUSTEE.

Registered No.

FORM OF TEMPORARY REGISTERED BOND

NORTHWEST NATURAL GAS COMPANY
First Mortgage Bond
4.00% Series due 2042

CUSIP: 667655 B*4

Interest Payment Dates: February 1 and August 1

Interest Rate: 4.00%

Maturity Date: October 31, 2042

Principal Amount:

Registered Holder:

NORTHWEST NATURAL GAS COMPANY, a corporation of the State of Oregon (hereinafter called the "Company"), for value received, hereby promises to pay to the Registered Holder named above, or assigns in whose name this bond is registered in the bond register, the unpaid portion of the Principal Amount specified above on the Maturity Date specified above, at the office or agency of the Company in the Borough of Manhattan, The City of New York (unless otherwise agreed by the Company and the registered owner), in such coin or currency of the United States of America as at the time of payment is legal tender for public and private debts, and to pay to the registered owner hereof interest on the principal amount

remaining unpaid from time to time from _____, 2012 [Date of initial authentication and delivery of bonds of this series] or from the most recent interest payment date to which interest has been paid, at the Interest Rate specified above in like coin or currency on each interest payment date specified above of each year, commencing February 1, 2013, until the Company's obligation with respect to the payment of such principal shall have been discharged.

This bond is a temporary bond and one of an issue of bonds of the Company issuable in series and is one of a series known as its First Mortgage Bonds, 4.00% Series due 2042, all bonds of all series issued and to be issued under and equally secured (except in so far as any sinking or other fund, established in accordance with the provisions of the Mortgage hereinafter mentioned, may afford additional security for the bonds of any particular series) by a Mortgage and Deed of Trust (herein, together with any indenture supplemental thereto, including the Twenty-first Supplemental Indenture dated as of October 15, 2012, called the Mortgage) dated as of July 1, 1946, executed by Portland Gas & Coke Company (now Northwest Natural Gas Company) to Deutsche Bank Trust Company Americas (formerly known as Bankers Trust Company) and R.G. Page (Stanley Burg, successor), as Trustees. Reference is made to the Mortgage for a description of the property mortgaged and pledged, the nature and extent of the security, the rights of the holders of the bonds and of the Trustees in respect thereof, the duties and immunities of the Trustees, the terms and conditions upon which the bonds are and are to be secured, the circumstances under which additional bonds may be issued and the rights of the Company to amend the Mortgage without any consent or other action by the holders of any series of bonds (including this series). With the consent of the Company and to the extent permitted by and as provided in the Mortgage, the rights and obligations of the Company and/or the rights of the holders of the bonds and/or coupons and/or the terms and provisions of the Mortgage may be modified or altered by the affirmative vote of the holders of at least seventy per centum (70%) in principal amount of the bonds then outstanding under the Mortgage and, if the rights of the holders of one or more, but less than all, series of bonds then outstanding are to be affected, then also by the affirmative vote of the holders of at least seventy per centum (70%) in principal amount of the bonds then outstanding of each series of bonds so to be affected (excluding in any case bonds disqualified from voting by reason of the Company's interest therein as provided in the Mortgage); provided that, without the consent of the holder hereof, no such modification or alteration shall, among other things, impair or affect the right of the holder to receive payment of the principal of (and premium, if any) and interest on this bond, on or after the respective due dates expressed herein, or permit the creation of any lien equal or prior to the lien of the Mortgage or deprive the holder of the benefit of a lien on the mortgaged and pledged property. The Company has the right, without any consent or other action by the holders of any series of bonds (including this series), to amend the Mortgage so as to change seventy per centum (70%) in the foregoing sentence to sixty-six and two-thirds per centum (66-2/3%).

Capitalized terms used in this bond which are not otherwise defined herein shall have the meanings ascribed thereto in the Mortgage.

The unpaid principal hereof may be declared or may become due prior to the Maturity Date hereinbefore named on the conditions, in the manner and at the time set forth in the Mortgage, upon the occurrence of a default as in the Mortgage provided.

Except as otherwise agreed between the Company and the registered owner of this bond, payment of the unpaid principal of this bond and interest payable on the Maturity Date will be made when due upon presentation and surrender hereof at the office of the Corporate Trustee or at such other office specified pursuant to Section 35 of the Mortgage and payments of interest (other than that payable on the Maturity Date hereof) shall be made, without presentation or surrender hereof, by check mailed to the registered address of the registered owner of this bond as such address shall appear on the bond register maintained pursuant to the Mortgage.

The transfer of this bond may be registered as prescribed in the Mortgage by the registered owner hereof in person, or by his duly authorized attorney, at the office or agency of the Company in the Borough of Manhattan, The City of New York, upon surrender for cancellation of this bond, together with a written instrument of transfer wherever required by the Company duly executed by the registered owner or by his duly authorized attorney, and, thereupon, a new fully registered bond of the same series for a like unpaid principal amount will be issued to the transferee in exchange herefor as provided in the Mortgage. The Company and the Trustees may deem and treat the person in whose name this bond is registered as the absolute owner hereof for the purpose of receiving payment and for all other purposes and neither the Company nor the Trustees shall be affected by any notice to the contrary.

In the manner prescribed in the Mortgage, any bonds of this series, upon surrender thereof, for cancellation, at the office or agency of the Company in the Borough of Manhattan, The City of New York, are exchangeable for a like aggregate unpaid principal amount of bonds of the same series of other authorized denominations.

At any time prior to April 30, 2042 (six months prior to the Maturity Date), the Company may, at its option, upon notice as provided in the Twenty-first Supplemental Indenture to the Mortgage, redeem at any time all, or from time to time any part of, this bond at 100% of the principal amount so redeemed, and the Make-Whole Amount determined for the Settlement Date specified by the Company with respect to such principal amount, together with accrued and unpaid interest thereon. Reference is made to the Twenty-first Supplemental Indenture for the terms and conditions of such redemption and the definitions of Make-Whole Amount and Settlement Date.

At any time on or after April 30, 2042, this bond will be redeemable at the option of the Company, in whole or in part, on not less than 30 nor more than 60 days' notice prior to the Settlement Date, at a redemption price equal to 100% of the principal amount of this bonds to be redeemed, plus accrued and unpaid interest thereon to the Settlement Date. This bond is not otherwise subject to voluntary or option redemption.

As provided in the Mortgage, the Company shall not be required to register transfers or make exchanges of bonds of any series for a period of ten days next preceding any interest payment date for bonds of such series, or next preceding any designation of bonds of such series to be redeemed, and the Company shall not be required to make transfers or exchanges of any bonds designated in whole or in part for redemption.

The Lien of the Mortgage is subject to being legally discharged prior to the Maturity Date of this bond upon the deposit with the Corporate Trustee of money or certain

obligations of, guaranteed by or backed by securities of, the government of the United States of America sufficient to pay the unpaid principal of, premium (if any) and interest on this bond when due, all in accordance with the terms and conditions of the Mortgage.

No recourse shall be had for the payment of the principal or Make-Whole Amount, if any, of or interest on this bond against any incorporator or any past, present or future subscriber to the capital stock, stockholder, officer or director of the Company or of any predecessor or successor corporation, as such, either directly or through the Company or any predecessor or successor corporation, under any rule of law, statute or constitution or by the enforcement of any assessment or otherwise, all such liability of incorporators, subscribers, stockholders, officers and directors being released by the holder or owner hereof by the acceptance of this bond and being likewise waived and released by the terms of the Mortgage.

This bond shall not become obligatory until Deutsche Bank Trust Company Americas (formerly known as Bankers Trust Company), the Corporate Trustee under the Mortgage, or its successor thereunder, shall have signed the form of authentication certificate endorsed hereon.

IN WITNESS WHEREOF, NORTHWEST NATURAL GAS COMPANY has caused this bond to be signed in its corporate name by its President or one of its Vice Presidents by his signature or a facsimile thereof, and its corporate seal to be impressed or imprinted hereon and attested by its Secretary or one of its Assistant Secretaries by his signature or a facsimile thereof.

Dated:

NORTHWEST NATURAL GAS COMPANY

Attest:

[SEAL]

By _____
[Title]

[Title]

This bond is one of the bonds, of the series herein designated, described or provided for in the within-mentioned Mortgage.

DEUTSCHE BANK TRUST COMPANY AMERICAS,
(New York)

Corporate Trustee

By _____
Authorized Officer

FOR VALUE RECEIVED, the undersigned hereby sells, assigns and transfers unto

[please insert social security
or other identifying
number of assignee]

[name and address of
transferee must be printed
or typewritten]

the within bond of NORTHWEST NATURAL GAS COMPANY and does hereby irrevocably constitute and appoint

attorney, to transfer said bond on the books of the within-mentioned Company, with full power of substitution in the premises.

Dated: _____

EX-4.1 3 ex41q32016.htm EXHIBIT 4.1 TWENTY-SECOND SUPPLEMENTAL INDENTURE

NORTHWEST NATURAL GAS COMPANY

TO

DEUTSCHE BANK TRUST COMPANY AMERICAS
(FORMERLY KNOWN AS BANKERS TRUST COMPANY),

As Corporate Trustee under the Mortgage and Deed of Trust,
dated as of July 1, 1946, of Portland Gas & Coke Company
(now Northwest Natural Gas Company)

TWENTY-SECOND SUPPLEMENTAL INDENTURE
PROVIDING, AMONG OTHER THINGS, FOR
AMENDMENTS TO THE MORTGAGE

DATED AS OF NOVEMBER 1, 2016

TWENTY-SECOND SUPPLEMENTAL INDENTURE

INDENTURE, dated as of the 1st day of November, 2016, made and entered into by and between NORTHWEST NATURAL GAS COMPANY (formerly Portland Gas & Coke Company), an Oregon corporation, with offices at One Pacific Square, 220 N.W. Second Avenue, Portland, Oregon 97209 (hereinafter sometimes called the Company), and DEUTSCHE BANK TRUST COMPANY AMERICAS (formerly known as BANKERS TRUST COMPANY), a New York banking corporation, with offices at 60 Wall Street, 27th Floor, New York, New York 10005 (hereinafter sometimes called the Corporate Trustee or the Trustee), as Trustee under the Mortgage and Deed of Trust, dated as of July 1, 1946 (hereinafter called the Mortgage), executed and delivered by Portland Gas & Coke Company (now Northwest Natural Gas Company) to secure the payment of bonds issued or to be issued under and in accordance with the provisions of the Mortgage, this indenture (hereinafter called Twenty-second Supplemental Indenture) being supplemental thereto;

WHEREAS the Mortgage was or is to be recorded in the official records of various counties in the States of Oregon and Washington which counties include or will include all counties in which this Twenty-second Supplemental Indenture is to be recorded; and

WHEREAS by the Mortgage the Company covenanted that it would execute and deliver such supplemental indenture or indentures and such further instruments and do such further acts as might be necessary or proper to carry out more effectually the purposes of the Mortgage and to make subject to the lien of the Mortgage any property thereafter acquired, made or constructed and intended to be subject to the lien thereof; and

WHEREAS the Company executed and delivered to the Trustee its First Supplemental Indenture, dated as of June 1, 1949 (hereinafter called its First Supplemental Indenture), its Second Supplemental Indenture, dated as of March 1, 1954 (hereinafter called its Second Supplemental Indenture), its Third Supplemental Indenture, dated as of April 1, 1956 (hereinafter called its Third Supplemental Indenture), its Fourth Supplemental Indenture, dated as of February 1, 1959 (hereinafter called its Fourth Supplemental Indenture), its Fifth Supplemental Indenture, dated as of July 1, 1961 (hereinafter called its Fifth Supplemental Indenture), its Sixth Supplemental Indenture, dated as of January 1, 1964 (hereinafter called its Sixth Supplemental Indenture), its Seventh Supplemental Indenture, dated as of March 1, 1966 (hereinafter called its Seventh Supplemental Indenture), its Eighth Supplemental Indenture, dated as of December 1, 1969 (hereinafter called its Eighth Supplemental Indenture), its Ninth Supplemental Indenture, dated as of April 1, 1971 (hereinafter called its Ninth Supplemental Indenture), its Tenth Supplemental Indenture, dated as of January 1, 1975 (hereinafter called its Tenth Supplemental Indenture), its Eleventh Supplemental Indenture, dated as of December 1, 1975 (hereinafter called its Eleventh Supplemental Indenture), its Twelfth Supplemental Indenture, dated as of July 1, 1981 (hereinafter called its Twelfth Supplemental Indenture), its Thirteenth Supplemental Indenture, dated as of June 1, 1985 (hereinafter called its Thirteenth Supplemental Indenture), its Fourteenth Supplemental Indenture, dated as of November 1, 1985 (hereinafter called its Fourteenth Supplemental Indenture), its Fifteenth Supplemental Indenture, dated as of July 1, 1986 (hereinafter called its Fifteenth Supplemental Indenture), its Sixteenth Supplemental Indenture, dated as of November 1, 1988 (hereinafter called its Sixteenth Supplemental Indenture), its Seventeenth Supplemental Indenture, dated as of October 1, 1989 (hereinafter called its Seventeenth Supplemental Indenture), its Eighteenth Supplemental Indenture, dated as of July 1, 1990

(hereinafter called its Eighteenth Supplemental Indenture), its Nineteenth Supplemental Indenture, dated as of June 1, 1991 (hereinafter called its Nineteenth Supplemental Indenture), and its Twentieth Supplemental Indenture, dated as of June 1, 1993 (hereinafter called its Twentieth Supplemental Indenture); and

WHEREAS the First through Twentieth Supplemental Indentures were filed for record, and were recorded and indexed, as a mortgage of both real and personal property, in the official records of various counties in the States of Oregon and Washington which counties include or will include all counties in which this Twenty-second Supplemental Indenture is to be recorded; and

WHEREAS the Company executed and delivered to the Trustee its Twenty-first Supplemental Indenture, dated as of October 15, 2012 (hereinafter called its Twenty-first Supplemental Indenture); and

WHEREAS said Twenty-first Supplemental Indenture was filed for record, and was recorded and indexed, as a mortgage of both real and personal property, and financing statements were filed, in the official records of the several counties and other offices in the States of Oregon and Washington listed below, as follows:

IN THE STATE OF OREGON

Real Property Mortgage Records

	County	Recordation Date	Document No.
1	Benton	10/29/12	2012-498581
2	Clackamas	10/29/12	2012-070543
3	Clatsop	10/30/12	2012-08835
4	Columbia	10/30/12	2012-008408
5	Coos	10/30/12	2012-9310
6	Douglas	10/29/12	2012-017139
7	Hood River	10/30/12	2012-03785
8	Lane	10/29/12	2012-055545
9	Lincoln	10/30/12	2012-10566
10	Linn	10/30/12	2012-16819
11	Marion	10/30/12	Reel 3439, Page 71
12	Multnomah	10/29/12	2012-138566
13	Polk	10/29/12	2012-011086
14	Tillamook	10/30/12	2012-006117
15	Wasco	10/30/12	2012-004085
16	Washington	10/29/12	2012-091133
17	Yamhill	10/30/12	2012-15633

Filed as a Financing Statement

	Office	Date Filed	File No.
18	Secretary of State	6/23/1993	R61325

IN THE STATE OF WASHINGTON

Real Property Mortgage Records

	County	Recordation Date	Document No.
19	Clark	10/29/12	4906220
20	Klickitat	10/30/12	1100058
21	Skamania	10/30/12	2012181913

WHEREAS an instrument dated as of June 14, 1951, was executed by the Company appointing J. C. KENNEDY as Co-Trustee in succession to said R. G. PAGE (resigned) under the Mortgage and by J. C. KENNEDY accepting the appointment as Co-Trustee under the Mortgage in succession to R. G. PAGE, which instrument was recorded in various counties in the States of Oregon and Washington; and

WHEREAS, in the Ninth Supplemental Indenture STANLEY BURG was appointed by the Company as Co-Trustee under the Mortgage in succession to J. C. KENNEDY (resigned) and in the Ninth Supplemental Indenture STANLEY BURG accepted such appointment as Co-Trustee under the Mortgage in succession to J. C. KENNEDY; and

WHEREAS, Section 103 of the Mortgage provides, among other things, that if for any reason it shall not be necessary, in the opinion of counsel, that there shall be a Co-Trustee and the Company shall file with the Corporate Trustee and also with the Co-Trustee, an Opinion of Counsel to that effect and a written request for the removal of the Co-Trustee, the Co-Trustee shall forthwith cease to be a Trustee under the Mortgage, and all powers of the Co-Trustee shall forthwith terminate, as shall his right, title or interest in and to the trust estate and, unless and until there shall be appointed a new Trustee or successor to the Co-Trustee, all the right, title and powers of the Trustees shall devolve upon the Corporate Trustee and its successors alone; and

WHEREAS, the Company having filed with the Corporate Trustee and the Co-Trustee such Opinion of Counsel and such written request; and

WHEREAS, pursuant to Sections 103 of the Mortgage, the Company and the Corporate Trustee have agreed that Stanley Burg has ceased to be a Trustee under the Mortgage, and all powers of the Co-Trustee have terminated, as has his right, title or interest in and to the trust estate; and, unless and until there shall be appointed a new Trustee or successor to the Co-Trustee, all the right, title and powers of the Trustees has devolved upon the Corporate Trustee and its successors alone; and

WHEREAS in addition to the property described in the Mortgage, as heretofore supplemented, the Company has acquired certain other property, rights and interests in property; and

WHEREAS, the Company has heretofore issued, in accordance with the provisions of the Mortgage, as supplemented, and on the date hereof there remain outstanding, the following series of First Mortgage Bonds:

<u>Series</u>	<u>Principal Amount Outstanding</u>
Secured Medium-Term Notes, Series A	\$ 10,000,000
Secured Medium-Term Notes, Series B (bonds of the Twenty-first Series)	\$541,700,000
4.00% Series due 2042 (bonds of the Twenty-second Series)	\$ 50,000,000

; and

WHEREAS Section 8 of the Mortgage provides that the form of each series of bonds (other than the First Series) issued thereunder shall be established by Resolution of the Board of Directors of the Company; that the form of such series, as established by the Board of Directors, shall specify the descriptive title of the bonds and various other terms thereof; and that such Series may also contain such provisions not inconsistent with the provisions of the Mortgage as the Board of Directors may, in its discretion, cause to be inserted therein expressing or referring to the terms and conditions upon which such bonds are to be issued and/or secured under the Mortgage; and

WHEREAS Section 120 of the Mortgage provides, among other things, that any power, privilege or right expressly or impliedly reserved to or in any way conferred upon the Company by any provision of the Mortgage, whether such power, privilege or right is in any way restricted or is unrestricted, may (to the extent permitted by law) be in whole or in part waived or surrendered or subjected to any restriction if at the time unrestricted or to additional restriction if already restricted, and the Company may enter into any further covenants, limitations or restrictions for the benefit of any one or more series of bonds issued thereunder, or the Company may cure any ambiguity contained therein or in any supplemental indenture or may (in lieu of establishment by Resolution as provided in Section 8 of the Mortgage) establish the terms and provisions of any series of bonds other than said First Series, by an instrument in writing executed and acknowledged by the Company in such manner as would be necessary to entitle a conveyance of real estate to record in all of the states in which any property at the time subject to the lien of the Mortgage shall be situated; and

WHEREAS the Company now desires (pursuant to the provisions of Section 120 of the Mortgage) to add to its covenants and agreements contained in the Mortgage, as heretofore supplemented, certain other covenants and agreements to be observed by it, to cure certain ambiguities contained in the Mortgage or in certain supplemental indentures, and to alter and amend in certain respects the covenants and provisions contained in the Mortgage, as heretofore supplemented and amended; and

WHEREAS the execution and delivery by the Company of this Twenty-second Supplemental Indenture, and the terms of the bonds of the Twenty-first Series hereinafter referred to, have been duly authorized by the Board of Directors of the Company by appropriate resolutions of the Board of Directors;

NOW, THEREFORE, THIS INDENTURE WITNESSETH:

That Northwest Natural Gas Company, in consideration of the above premises and such other valuable consideration, the receipt and sufficiency whereof is hereby acknowledged, and in further assurance of the estate, title and rights of the Trustee, and in order further to secure the payment both of the principal of and interest and premium, if any, on the bonds from time to time issued under the Mortgage, according to their

tenor and effect, and the performance of all the provisions of the Mortgage (including any instruments supplemental thereto and any modification made as in the Mortgage provided) and of said bonds, hereby grants, bargains, sells, releases, conveys, assigns, transfers, mortgages, pledges, sets over and confirms (subject, however, to Excepted Encumbrances, as defined in Section 6 of the Mortgage) to Deutsche Bank Trust Company Americas, as Trustee under the Mortgage, and to its successor or successors in said trust, and to said Trustee and its successors and assigns forever, all property, real, personal and mixed, acquired by the Company after the date of the Mortgage, of the kind or nature specifically mentioned in Article XXI of the Mortgage or of any other kind or nature (except any herein or in the Mortgage expressly excepted) now owned or, subject to the provisions of subsection (I) of Section 87 of the Mortgage, hereafter acquired by the Company (by purchase, consolidation, merger, donation, construction, erection or in any other way) and wheresoever situated, including (without in anywise limiting or impairing by the enumeration of the same the scope and intent of the foregoing) all lands, gas plants, by-product plants, gas holders, gas mains and pipes; all power sites, water rights, reservoirs, canals, raceways, dams, aqueducts, and all other rights or means for appropriating, conveying, storing and supplying water; all rights of way and roads; all plants for the generation of electricity by steam, water and/or other power; all power houses, street lighting systems, standards and other equipment incidental thereto, telephone, radio, television and air-conditioning systems and equipment incidental thereto, water works, water systems, steam heat and hot water plants, substations, lines, service and supply systems, bridges, culverts, tracts, ice or refrigeration plants and equipment, offices, buildings and other structures and the equipment thereof; all machinery, engines, boilers, dynamos, gas, electric and other machines, regulators, meters, transformers, generators, motors, gas, electrical and mechanical appliances, conduits, cables, gas, water, steam heat or other pipes, service pipes, fittings, valves and connections, pole and transmission lines, wires, cables, tools, implements, apparatus, furniture and chattels; all franchises, consents or permits; all lines for the transmission and distribution of gas, electric current, steam heat or water for any purpose including mains, pipes, conduits, towers, poles, wires, cables, ducts and all apparatus for use in connection therewith; all real estate, lands, easements, servitudes, licenses, permits, franchises, privileges, rights of way and other rights in or relating to public or private property, real or personal, or the occupancy of such property and (except as herein or in the Mortgage, as heretofore supplemented, expressly excepted) all right, title and interest the Company may now have or may hereafter acquire in and to any and all property of any kind or nature wheresoever situated.

TOGETHER WITH all and singular the tenements, hereditaments, prescriptions, servitudes and appurtenances belonging or in anywise appertaining to the aforementioned property or any part thereof, with the reversion and reversions, remainder and remainders and (subject to the provisions of Section 57 of the Mortgage) the tolls, rents, revenues, issues, earnings, income, product and profits thereof, and all the estate, right, title and interest and claim whatsoever, at law as well as in equity, which the Company now has or may hereafter acquire in and to the aforementioned property and franchises and every part and parcel thereof.

IT IS HEREBY AGREED by the Company that, subject to the provisions of subsection (I) of Section 87 of the Mortgage, all the property, rights, and franchises acquired by the Company (by purchase, consolidation, merger, donation, construction, erection or in any other way) after the date hereof (other than any Excepted Property) shall be and are as fully granted and conveyed hereby and by the Mortgage, and as fully embraced within the lien hereof and the lien of the Mortgage, as supplemented, as if such property, rights and franchises were now owned by the Company and were

specifically described herein or in the Mortgage, as heretofore supplemented, and conveyed hereby or thereby.

TO HAVE AND TO HOLD all such properties, real, personal and mixed, granted, bargained, sold, released, conveyed, assigned, transferred, mortgaged, pledged, set over or confirmed by the Company as aforesaid, or intended so to be, to Deutsche Bank Trust Company Americas, as Trustee, and its successors and assigns forever.

IN TRUST NEVERTHELESS, for the same purposes and upon the same terms, trusts and conditions and subject to and with the same provisos and covenants as are set forth in the Mortgage, as heretofore supplemented, this Twenty-second Supplemental Indenture being supplemental thereto.

AND IT IS HEREBY COVENANTED by the Company that all the terms, conditions, provisos, covenants and provisions contained in the Mortgage, as heretofore supplemented, shall affect and apply to the property hereinbefore described and conveyed, and to the estates, rights, obligations and duties of the Company and the Trustee and the beneficiaries of the trust with respect to said property, and to the Trustee and its successors in the trust, in the same manner and with the same effect as if the said property had been owned by the Company at the time of the execution of the Mortgage, and had been specifically and at length described in and conveyed to said Trustee by the Mortgage as a part of the property therein stated to be conveyed.

The Company further covenants and agrees to and with the Trustee and its successors in said trust under the Mortgage, as follows:

ARTICLE I.

AMENDMENTS OF CERTAIN PROVISIONS OF THE MORTGAGE

SECTION 1.01 *Meetings and Consents of Bondholders.*

Pursuant to the reservation of right in Section 6 of Article III of the Ninth Supplemental Indenture, the Company hereby amends Article XIX of the Mortgage to read as set forth in Section 6 of Article III of the Ninth Supplemental Indenture.

SECTION 1.02 *Release and Substitution of Property.*

Pursuant to the reservation of right in Section 2.03 of Article II of the Eighteenth Supplemental Indenture, the Company hereby

(A) amends subdivision (1) of Section 59 of the Mortgage to read as follows:

“(1) an Officers’ Certificate describing in reasonable detail the property to be released and requesting such release;”

(B) amends subdivisions (3)(b) and (c) of Section 59 of the Mortgage to read as follows:

“(b) the fair value, and the Cost (or as to Property Additions constituting Funded Property of which the fair value to the Company at the time the same became Funded Property was less than the Cost, then such fair value in lieu of Cost), in the opinion of the signers, of the property (or securities) to be released; (c) the Cost (or as to Property Additions constituting Funded Property of which the fair value to the Company at the time the same became Funded Property was less than the Cost, then such fair value in lieu of Cost), in the opinion of the signers, of any portion thereof that is Funded Property;”

and

- (C) amends the first six lines of subdivision (4) of Section 59 of the Mortgage to read as follows:
-

“(4) an amount in cash, to be held by the Corporate Trustee as part of the Mortgaged and Pledged Property, equivalent to the amount, if any, by which the Cost (or as to Property Additions constituting Funded Property of which the fair value to the Company at the time the same became Funded Property was less than the Cost, then such fair value in lieu of Cost) of the property to be released, as specified in the Engineer’s Certificate provided for in subdivision (3) above, exceeds the aggregate of the following items:”

SECTION 1.03 *Net Earning Certificate.*

Annual Interest Requirements for Variable Rate Bonds. Pursuant to the reservation of right in Section 2.01 of Article II of the Eighteenth Supplemental Indenture, the Company hereby amends subdivision (B) of Section 7 of the Mortgage and the first paragraph following such subdivision (B) to read as set forth in such Section 2.01.

SECTION 1.04 *Bonding Ratio.*

Pursuant to the reservation of right in Section 2.02 of Article II of the Eighteenth Supplemental Indenture, the Company hereby amends Sections 25, 26, 59 and 61 of the Mortgage by substituting the phrase “seventy per centum (70%)” for the phrase “sixty per centum (60%)” and substituting the phrase “ten-sevenths (10/7ths)” for the phrase “ten-sixths (10/6ths)” each time such phrase or phrases occur in said Sections.

SECTION 1.05 *Deductions for Retired Automotive Equipment.*

Pursuant to the reservation of right in Section 3 of the Third Supplemental Indenture, the Company hereby amends the Mortgage, as amended and supplemented, to delete clause (ii) of Section 4(II)(A) of the Mortgage, as amended and supplemented.

SECTION 1.06 *Releases of Unfunded Property.*

Pursuant to the reservation of right in Section 2.03 of Article II of the Eighteenth Supplemental Indenture, the Company hereby amends (A) Section 60 of the Mortgage as provided in such Section 2.03 and (B) the definition of “Engineer’s Certificate” in Section 3 of the Mortgage to read as provided in such Section 2.03.

SECTION 1.07 *Excepted Property.*

The term “Excepted Property” shall mean the property described in clauses (1) through (6) of the paragraph on pages 10-11 of the Mortgage, as amended and supplemented from time to time (and the corresponding provision in each supplemental indenture thereto).

Clause (1) of the paragraph on pages 10-11 of the Mortgage (and the corresponding provision in each supplemental indenture thereto) is hereby amended to read:

“(1) all cash on hand or in banks or other financial institutions, deposit accounts, securities accounts, shares of stock, interests in business trusts, general or limited partnerships or limited liability companies, bonds, notes, mortgages, other evidences of indebtedness and other securities, security entitlements, commodities accounts and other investment property of

whatsoever kind and nature, not hereafter specifically pledged, paid, deposited, delivered or held hereunder or covenanted so to be;”

Clause (3) of the paragraph on pages 10-11 of the Mortgage (and the corresponding provision in each supplemental indenture thereto) is hereby amended to read:

“(3) bills, notes and accounts receivable, judgments, demands and choses in action (including payment intangibles, commercial tort claims and tax credits), and all contracts, leases and operating agreements (including policies of insurance, chattel paper, cooperative interests, warehouse receipts, and contract rights granted by statute or governmental action, including rights to bill and collect revenues or other amounts from customers or others) not specifically pledged hereunder or hereinafter covenanted so to be;

Clause (6) of the paragraph on pages 10-11 of the Mortgage (and the corresponding provision in each supplemental indenture thereto) is hereby amended to read:

“(6) the Company’s franchise to be a corporation; and all properties, real, personal and mixed, which subsequent to November 1, 2016 have been released from the Lien of this Indenture, and any improvements, extensions and additions to such properties and renewals, replacements and substitutions of or for any parts thereof;”

SECTION 1.08 *Additional Definitions.*

Section 3 of the Mortgage is hereby amended to add the following definitions:

“The term “Authorized Officer” means the President, any Vice President, the Treasurer, any Assistant Treasurer, or any other officer, manager or agent of the Company duly authorized pursuant to a Resolution to act in respect of matters relating to this Indenture.

The term “Bonding Ratio” shall mean the percentage stated in Section 25 of the Mortgage, as amended and supplemented, and the term “Reciprocal of the Bonding Ratio” shall mean the reciprocal of such percentage.

The term “Business Day”, when used with respect to a place of payment for the bonds or any other particular location specified in the bonds or this Indenture, means any day, other than a Saturday or Sunday, which is not a day on which banking institutions or trust companies in such place of payment or other location are required by law, regulation or executive order to remain closed, or a day on which the corporate trust office of the Corporate Trustee is closed for business.

The term “Company Order” means a written order or request signed in the name of the Company by an Authorized Officer of the Company and delivered to the Corporate Trustee.

The term “corporation” means a corporation, association, company, limited liability company, partnership, limited partnership, joint stock company or business trust, and references to “corporate” and other derivations of “corporation” herein shall be deemed to include appropriate derivations of such entities.

The term “Fair Value”, with respect to property, means the fair value of such property as determined in the reasonable judgment of the Person certifying to such value, such

determination to be based on any one or more factors deemed relevant by such Person, including, without limitation, (a) the amount which would be likely to be obtained in an arm's-length transaction with respect to such property between an informed and willing buyer and an informed and willing seller, under no

compulsion, respectively, to buy or sell, (b) the amount of investment with respect to such property which, together with a reasonable return thereon, would be likely to be recovered through ordinary business operations or otherwise, (c) the Cost, accumulated depreciation, and replacement cost with respect to such property and/or (d) any other relevant factors; provided, however, that (x) the Fair Value of property shall be determined without deduction for any Liens on such property prior to the Lien of this Indenture (except that the Fair Value of property to be released from the Lien of this Indenture shall be determined with deduction for any Liens on such property prior to the Lien of this Indenture) and (y) the Fair Value to the Company of Property Additions may be of less value to a Person which is not the owner or operator of the Mortgaged and Pledged Property or any portion thereof than to a Person which is such owner or operator. Fair Value may be determined, without physical inspection, by the use of accounting and engineering records and other data maintained by the Company or otherwise available to the Engineer certifying the same.

The term "Governmental Authority" means the government of the United States or of any State or Territory thereof or of the District of Columbia or of any county, municipality or other political subdivision of any thereof, or any department, agency, authority or other instrumentality of any of the foregoing.

The term "Holder" means a Person in whose name a bond is registered pursuant to Section 13 of the Mortgage, as amended and supplemented.

The term "Issue Date", when used with respect to the bonds of the Twenty-first Series, shall have the meaning specified in the Twentieth Supplemental Indenture.

The term "Lien" means any mortgage, deed of trust, pledge, security interest, encumbrance, easement, lease, reservation, restriction, servitude, charge or similar right and any other lien of any kind, including, without limitation, any conditional sale or other title retention agreement, any lease in the nature thereof, and any defect, irregularity, exception or limitation in record title.

The term "Person" means any individual, corporation, joint venture, trust or unincorporated organization or any Governmental Authority.

The term "Permitted Liens" shall mean as of any particular time, any of the following:

(a) Liens for taxes, assessments and other governmental charges or requirements which are not delinquent or which are being contested in good faith by appropriate proceedings or of which at least ten (10) Business Days notice has not been given to the general counsel of the Company or to such other Person designated by the Company to receive such notices;

(b) mechanics', workmen's, repairmen's, materialmen's, warehousemen's, and carriers' Liens, other Liens incident to construction, Liens or privileges of any employees of the Company for salary or wages earned, but not yet payable, and other Liens, including without limitation Liens for worker's compensation awards, arising in the ordinary course of business for charges or requirements which are not delinquent or which are being contested in good faith and by appropriate proceedings or of which at

least ten (10) Business Days notice has not been given to the general counsel of the Company or to such other Person designated by the Company to receive such notices;

(c) Liens in respect of attachments, judgments or awards arising out of judicial or administrative proceedings (i) in an amount not exceeding the greater of (A) Ten Million Dollars (\$10,000,000) and (B) three percent (3%) of the principal amount of the bonds then Outstanding or (ii) with respect to which the Company shall (X) in good faith be prosecuting an appeal or other proceeding for review and with respect to which the Company shall have secured a stay of execution pending such appeal or other proceeding or (Y) have the right to prosecute an appeal or other proceeding for review or (Z) have not received at least ten (10) Business Days notice given to the general counsel of the Company or to such other Person designated by the Company to receive such notices;

(d) easements, leases, reservations or other rights of others in, on, over and/or across, and laws, regulations and restrictions affecting, and defects, irregularities, exceptions and limitations in title to, the Mortgaged and Pledged Property or any part thereof; provided, however, that such easements, leases, reservations, rights, laws, regulations, restrictions, defects, irregularities, exceptions and limitations do not in the aggregate materially impair the use by the Company of the Mortgaged and Pledged Property considered as a whole for the purposes for which it is held by the Company;

(e) Liens, defects, irregularities, exceptions and limitations in (i) title to real property subject to rights-of-way in favor of the Company or otherwise or used or to be used by the Company primarily for right-of-way purposes; (ii) real property held under lease, easement, license or similar right; or (iii) the rights-of-way, leases, easements, licenses or similar rights in favor of the Company; provided, however, that (A) the Company shall have obtained from the apparent owner or owners of such real property a sufficient right, by the terms of the instrument granting such right-of-way, lease, easement, license or similar right, to the use thereof for the purposes for which the Company acquired the same; (B) the Company has power under eminent domain or similar statutes to remove or subordinate such Liens, defects, irregularities, exceptions or limitations or (C) such defects, irregularities, exceptions and limitations may be otherwise remedied without undue effort or expense; and defects, irregularities, exceptions and limitations in title to flood lands, flooding rights and/or water rights;

(f) Liens securing indebtedness or other obligations neither created, assumed nor guaranteed by the Company nor on account of which it customarily pays interest upon real property or rights in or relating to real property acquired by the Company for the purpose of the transmission or distribution of electric energy, gas or water, for the purpose of telephonic, telegraphic, radio, wireless or other electronic communication or otherwise for the purpose of obtaining rights-of-way;

(g) leases existing on November 1, 2016 affecting properties owned by the Company at said date and renewals and extensions thereof; and leases affecting such properties entered into after such date or affecting properties acquired by the Company after such date which, in either case, (i) have respective terms of not more than ten (10) years (including extensions or

renewals at the option of the tenant) or (ii) do not materially impair the use by the Company of such properties for the respective purposes for which they are held by the Company;

(h) Liens vested in lessors, licensors, franchisors or permittees for rent or other amounts to become due or for other obligations or acts to be performed, the payment of which rent or the performance of which other obligations or acts is required under leases, subleases, licenses, franchises or permits, so long as the payment of such rent or other amounts or the performance of such other obligations or acts is not delinquent or is being contested in good faith and by appropriate proceedings;

(i) controls, restrictions, obligations, duties and/or other burdens imposed by federal, state, municipal or other law, or by rules, regulations or orders of Governmental Authorities, upon the Mortgaged and Pledged Property or any part thereof or the operation or use thereof or upon the Company with respect to the Mortgaged and Pledged Property or any part thereof or the operation or use thereof or with respect to any franchise, grant, license, permit or public purpose requirement, or any rights reserved to or otherwise vested in Governmental Authorities to impose any such controls, restrictions, obligations, duties and/or other burdens;

(j) rights which Governmental Authorities may have by virtue of franchises, grants, licenses, permits or contracts, or by virtue of law, to purchase, recapture or designate a purchaser of or order the sale of the Mortgaged and Pledged Property or any part thereof, to terminate franchises, grants, licenses, permits, contracts or other rights or to regulate the property and business of the Company; and any and all obligations of the Company correlative to any such rights;

(k) Liens required by law or governmental regulations (i) as a condition to the transaction of any business or the exercise of any privilege or license, (ii) to enable the Company to maintain self-insurance or to participate in any funds established to cover any insurance risks, (iii) in connection with workmen's compensation, unemployment insurance, social security, any pension or welfare benefit plan or (iv) to share in the privileges or benefits required for companies participating in one or more of the arrangements described in clauses (ii) and (iii) above;

(l) Liens on the Mortgaged and Pledged Property or any part thereof which are granted by the Company to secure duties or public or statutory obligations or to secure, or serve in lieu of, surety, stay or appeal bonds;

(m) rights reserved to or vested in others to take or receive any part of any coal, ore, gas, oil and other minerals, any timber and/or any electric capacity or energy, gas, water, steam and any other products, developed, produced, manufactured, generated, purchased or otherwise acquired by the Company or by others on property of the Company;

(n) (i) rights and interests of Persons other than the Company arising out of contracts, agreements and other instruments to which the Company is a party and which relate to the common ownership or joint use of property; and (ii) all Liens on the interests of Persons other than the Company in property owned in common by such Persons and the Company if and to the extent that the enforcement of such Liens would not adversely affect the interests of the Company in such property in any material respect;

(o) any restrictions on assignment and/or requirements of any assignee to qualify as a permitted assignee and/or public utility or public service corporation;

(p) any Liens which have been bonded for the full amount in dispute or for the payment of which other adequate security arrangements have been made;

(q) any controls, liens, restrictions, regulations, easements, exceptions or reservations of any public authority or unit applying particularly to any form of space satellites (including but not limited to solar power satellites), space stations and other analogous facilities whether or not in the earth's atmosphere;

(r) easements, ground leases or rights-of-way in, upon, over and/or across the property or rights-of-way of the Company for the purpose of roads, pipe lines, transmission lines, distribution lines, communication lines, railways, removal or transportation of coal, lignite, gas, oil or other minerals or timber, and other like purposes, or for the joint or common use of real property, rights-of-way, facilities and/or equipment; provided, however, that such grant shall not materially impair the use of the property or rights-of-way for the purposes for which such property or rights-of-way are held by the Company;

(s) any Lien of the Trustees granted pursuant to Section 96 of this Indenture; and

(t) any Lien securing indebtedness for the payment of which money in the necessary amount shall have been irrevocably deposited in trust with the trustee or other holder of such Lien; provided, however, that if such indebtedness is to be redeemed or otherwise prepaid prior to the stated maturity thereof, any notice requisite to such redemption or prepayment shall have been given in accordance with the mortgage or other instrument creating such Lien or irrevocable instructions to give such notice shall have been given to such trustee or other holder."

SECTION 1.09 *Governing Law*. The Mortgage, as amended and supplemented, shall be governed by and construed in accordance with the law of the State of New York (including without limitation Section 5-1401 of the New York General Obligations Law or any successor to such statute), without giving effect to its conflicts-of-law principles, except to the extent that the Trust Indenture Act shall be applicable and except to the extent that the law of any jurisdiction wherein any portion of the Mortgaged and Pledged Property is

located shall mandatorily govern the creation of a mortgage lien on or security interest in, or perfection, priority or enforcement of the Lien of this Indenture or exercise of remedies with respect to, such portion of the Mortgaged and Pledged Property.

SECTION 1.10 *Effective Date*. Each of the amendments set forth in this Article I shall be effective as of November 1, 2016.

ARTICLE II.

THE COMPANY RESERVES THE RIGHT TO AMEND CERTAIN PROVISIONS OF THE MORTGAGE

SECTION 2.01. *Delete Earnings Test*. The Company reserves the right, without any consent, vote or other action by holders of bonds of any series of bonds subsequent to the Twenty-second Series or by holders of bonds of the Twenty-first Series with an Issue Date subsequent to November 1, 2016, to amend the Mortgage, as amended and supplemented, to delete all provisions in the Mortgage, as amended and supplemented, which require a Net Earning Certificate, whether as a condition precedent to the authentication and delivery of bonds or otherwise, including Section 27, Section 28(6), the penultimate paragraph of Section 29, and Section 30(3) of the Mortgage, as amended and supplemented.

SECTION 2.02. *Delete Requirement for Disposition of Released Property*. The Company reserves the right, without any consent, vote or other action by holders of bonds of any series of bonds subsequent to the Twenty-second Series or by holders of bonds of the Twenty-first Series with an Issue Date subsequent to November 1, 2016, to amend the Mortgage, as amended and supplemented, (A) to delete clause (a) of subdivision (3) of Section 59 of the Mortgage, as amended and supplemented, and (B) to delete clause (b) of subdivision (1) of Section 60(II) of the Mortgage, as amended and supplemented.

SECTION 2.03. *Redefine Funded Property*. The Company reserves the right, without any consent, vote or other action by holders of any series of bonds subsequent to the Twenty-second Series or by holders of bonds of the Twenty-first Series with an Issue Date subsequent to November 1, 2016, to amend Section 5 of the Mortgage, as amended and supplemented, to replace the first two paragraphs thereof with three paragraphs reading substantially as follows:

“The term “Funded Property Certificate” shall mean an Independent Engineer’s Certificate delivered to the Corporate Trustee, within ninety days after the date thereof,

(A) stating the aggregate principal amount of bonds then Outstanding under this Indenture;

(B) stating the aggregate principal amount of bonds which the Company is then entitled to have authenticated and delivered by compliance with the provisions of Section 29 hereof;

(C) stating an amount equal to the sum of the amounts stated in clauses (A) and (B) above divided by the Bonding Ratio;

(D) describing all or any portion of the Mortgaged and Pledged Property which, in the opinion of the signers, has an aggregate Fair Value not less than the amount stated in clause (C) above.

The term "Funded Property" shall mean:

(1) all Mortgaged and Pledged Property described in the most recent Funded Property Certificate delivered to the Corporate Trustee;

(2) all Property Additions to the extent that the same shall have been made the basis of the authentication and delivery of bonds under this Indenture after the date of the most recent Funded Property Certificate delivered to the Corporate Trustee;

(3) all Property Additions to the extent that the same shall have been made the basis of the release of property from the Lien of this Indenture after the date of the most recent Funded Property Certificate delivered to the Corporate Trustee, subject, however, to the provisions of Section 59 hereof;

(4) all Property Additions to the extent that the same shall have been substituted (otherwise than under the release or cash withdrawal provisions hereof) for Funded Property retired after the date of the most recent Funded Property Certificate delivered to the Corporate Trustee; and

(5) all Property Additions to the extent that the same shall have been made the basis of the withdrawal of any Funded Cash as hereinafter defined after the date of the most recent Funded Property Certificate delivered to the Corporate Trustee, except to the extent that any such Property Additions shall no longer be deemed to be Funded Property in accordance with the provisions of other Sections of this Indenture.

In the event that in any certificate filed with the Corporate Trustee in connection with any of the transactions referred to in clauses (2), (3) and (5) of this Section only a part of the Cost or fair value of the Property Additions described in such certificate shall be required for the purposes of such certificate, then such Property Additions shall be deemed to be Funded Property only to the extent so required for the purpose of such certificate.”

The foregoing amendment shall not become effective unless and until the Company elects to deliver, and shall have delivered, a Funded Property Certificate to the Corporate Trustee.

SECTION 2.04. *Insurance.* The Company reserves the right, without any consent, vote or other action by holders of any series of bonds subsequent to the Twenty-second Series or by holders of bonds of the Twenty-first Series with an Issue Date subsequent to November 1, 2016, to amend Section 37 of the Mortgage, as amended and supplemented, to read substantially as follows:

“Section 37. (a) The Company shall (i) keep or cause to be kept all the Mortgaged and Pledged Property insured against loss by fire, to the extent that property of similar character is usually so insured by companies similarly situated and operating like properties, to a reasonable amount, by reputable insurance companies, the proceeds of such insurance (except as to any loss of Excepted Property and except as to any particular loss less than the greater of (A) Twenty Million Dollars (\$20,000,000) and (B) three percent (3%) of the principal amount of bonds Outstanding on the date of such particular loss) to be made payable, subject to applicable law, to the Corporate Trustee as the interest of the Corporate Trustee may appear, or to the trustee or other holder of any Lien prior hereto upon property subject to the Lien hereof, if the terms thereof require such payment, or to the agent or representative of the owners of jointly-owned property if the terms of such joint ownership require such payment or

(ii) in lieu of or supplementing such insurance in whole or in part, adopt some other method or plan of protection against loss by fire at least equal in protection to the method or plan of protection against loss by fire of companies similarly situated and operating properties subject to

similar fire hazards or properties on which an equal primary fire insurance rate has been set by reputable insurance companies; and if the Company shall adopt such other method or plan of protection, it shall, subject to applicable law (and except as to any loss of Excepted Property and except as to any particular loss less than the greater of (X) Twenty Million Dollars (\$20,000,000) and (Y) three percent (3%) of the principal amount of bonds Outstanding on the date of such particular loss) pay to the Corporate Trustee on account of any loss covered by such method or plan an amount in cash equal to the amount of such loss less any amounts otherwise paid to the Corporate Trustee in respect of such loss or paid to the trustee or other holder of any Lien prior hereto upon property subject to the Lien hereof in respect of such loss if the terms thereof require such payment or paid to the agent or representative of the owners of jointly-owned property if the terms of such joint ownership require such payment. Any cash so required to be paid by the Company pursuant to any such method or plan shall for the purposes of this Indenture be deemed to be proceeds of insurance. In case of the adoption of such other method or plan of protection, the Company shall furnish to the Corporate Trustee a certificate of an actuary or other qualified person appointed by the Company with respect to the adequacy of such method or plan.

Anything herein to the contrary notwithstanding, the Company may have fire insurance policies with (i) a deductible provision in a dollar amount per occurrence not exceeding the greater of (A) Twenty Million Dollars (\$20,000,000) and (B) three percent (3%) of the principal amount of the bonds Outstanding on the date such policy goes into effect, and/or (ii) co-insurance or self insurance provisions with a dollar amount per occurrence not exceeding thirty percent (30%) of the loss proceeds otherwise payable; provided, however, that the dollar amount described in clause (i) above may be exceeded to the extent such dollar amount per occurrence is below the deductible amount in effect as to fire insurance (X) on property of similar character insured by companies similarly situated and operating like property or (Y) on property as to which an equal primary fire insurance rate has been set by reputable insurance companies.

(b) All moneys paid to the Corporate Trustee by the Company in accordance with this Section or received by the Corporate Trustee as proceeds of any insurance, in either case on account of a loss on or with respect to Funded Property, shall, subject to any Lien prior hereto upon property subject to the Lien hereof, be held by the Corporate Trustee and, subject as aforesaid, shall be paid by it to the Company to reimburse the Company for an equal amount expended or committed for expenditure in the rebuilding, renewal and/or replacement of or substitution for the property destroyed or damaged, upon receipt by the Corporate Trustee of:

- (i) a letter signed by an officer of the Company requesting such payment,
- (ii) an Engineer's Certificate:
 - (A) describing the property so damaged or destroyed;
 - (B) stating the Cost of such property (or, if the fair value to the Company of such property at the time the same became Funded Property was certified to be an amount less than the Cost thereof, then such fair value, as so certified, in lieu of Cost) or, if such damage or destruction shall have affected

only a portion of such property, stating the allocable portion of such Cost or fair value;

(C) stating the amounts so expended or committed for expenditure in the rebuilding, renewal, replacement of and/or substitution for such property; and

(D) stating the fair value to the Company of such property as rebuilt or renewed or as to be rebuilt or renewed and/or of the replacement or substituted property, and if

(a) within six months prior to the date of acquisition thereof by the Company, such property has been used or operated, by a person or persons other than the Company, in a business similar to that in which it has been or is to be used or operated by the Company, and

(b) the fair value to the Company of such property as set forth in such Engineer's Certificate is not less than Twenty-five Thousand Dollars (\$25,000) and not less than one percent (1%) of the aggregate principal amount of the bonds at the time Outstanding,

the Engineer making the statement required by this clause (D) shall be an Independent Engineer, and

(iii) an Opinion of Counsel stating that, in the opinion of the signer, the property so rebuilt or renewed or to be rebuilt or renewed, and/or the replacement property, is or will be subject to the Lien hereof.

Any such moneys not so applied within thirty-six (36) months after its receipt by the Corporate Trustee, or in respect of which notice in writing of intention to apply the same to the work of rebuilding, renewal, replacement or substitution then in progress and uncompleted shall not have been given to the Corporate Trustee by the Company within such thirty-six (36) months, or which the Company shall at any time notify the Corporate Trustee is not to be so applied, shall thereafter be withdrawn, used or applied in the manner, to the extent and for the purposes, and subject to the conditions, provided in Section 61; provided, however, that if the amount of such moneys shall exceed the amount stated pursuant to clause (B) in the Engineer's Certificate referred to above, the amount of such excess shall not be deemed to be Funded Cash, shall not be subject to Section 61 and shall be remitted to or upon the order of the Company upon the withdrawal, use or application of the balance of such moneys pursuant to Section 61.

Anything in this Indenture to the contrary notwithstanding, if property on or with respect to which a loss occurs constitutes Funded Property in part only, the Company may, at its election, obtain the reimbursement of insurance proceeds attributable to the part of such property which constitutes Funded Property under this subsection (b) and obtain the reimbursement of insurance proceeds attributable to the part of such property which does not constitute Funded Property under subsection (c) of this Section.

(c) All moneys paid to the Corporate Trustee by the Company in accordance with this Section or received by the Corporate Trustee as proceeds of any insurance, in either case on account of a loss on or with respect to property which does not constitute Funded Property, shall, subject to the requirements of any Lien prior hereto upon

property subject to the Lien hereof, be held by the Corporate Trustee and, subject as aforesaid, shall be paid by it to the Company upon receipt by the Corporate Trustee of:

- (i) a letter from an officer of the Company requesting such payment;
-

(ii) an Engineer's Certificate stating:

(A) that such moneys were paid to or received by the Corporate Trustee on account of a loss on or with respect to property which does not constitute Funded Property; and

(B) if true, either (I) that the aggregate amount of the Cost or fair value to the Company (whichever is less) of all Property Additions which do not constitute Funded Property (excluding, to the extent of such loss, the property on or with respect to which such loss was incurred), after making deductions therefrom and additions thereto of the character contemplated by Section 4, is not less than zero (0) or (II) that the amount of such loss does not exceed the aggregate Cost or fair value to the Company (whichever is less) of Property Additions acquired, made or constructed on or after the ninetieth (90th) day prior to the date of the request for such payment; or

(C) if neither of the statements contemplated in subclause (B) above can be made, the amount by which zero (0) exceeds the amount referred to in subclause (B)(I) above (showing in reasonable detail the calculation thereof); and

(iii) if the Engineer's Certificate required by clause (ii) above contains neither of the statements contemplated in clause (ii)(B) above, an amount in cash, to be held by the Corporate Trustee as part of the Mortgaged and Pledged Property, equal to the amount shown in clause (ii)(C) above.

To the extent that the Company shall be entitled to withdraw proceeds of insurance pursuant to this subsection (c), such proceeds shall be deemed not to constitute Funded Cash.

(d) Whenever under the provisions of this Section the Company is required to deliver moneys to the Corporate Trustee and at the same time shall have satisfied the conditions set forth herein for payment of moneys by the Corporate Trustee to the Company, there shall be paid to or retained by the Corporate Trustee or paid to the Company, as the case may be, only the net amount."

SECTION 2.05. *Property Additions*. The Company reserves the right, without any consent, vote or other action by holders of any series of bonds subsequent to the Twenty-second Series or by holders of bonds of the Twenty-first Series with an Issue Date subsequent to November 1, 2016, to amend subdivision (I) of Section 4 of the Mortgage, as amended and supplemented, to read substantially as follows:

"(I) The term "Property Additions" shall mean Mortgaged and Pledged Property acquired by the Company by purchase, consolidation, merger, donation, construction, erection or in any way whatsoever, subsequent to March 31, 1946, or in the process of construction or erection in so far as actually constructed or erected subsequent to March 31, 1946, and used or useful in any business that the Company may conduct.

At any time and from time to time, the Company may elect, by supplemental indenture, to subject any property that is Excepted Property to the Lien of the Mortgage, as amended and supplemented, and such property shall thereupon cease to be Excepted Property.

The term "Natural Gas and Oil Production Property" shall mean all leases, consolidated leases and operating agreements, fee lands and other mineral interest, gas and oil rights, wells, field compressors, equipment and other properties and rights whether producing or non-producing, used

or useful primarily and principally for the production and gathering of natural gas up to the point of connection with any gas transmission or distribution system or used or useful primarily and principally for the production and gathering of oil.

SECTION 2.06. *Priority and Authority Opinions.* The Company reserves the right, without any consent, vote or other action by holders of any series of bonds subsequent to the Twenty-second Series or by holders of bonds of the Twenty-first Series with an Issue Date subsequent to November 1, 2016, to restate subdivisions (7) and (9) of Section 28 of the Mortgage, as amended and supplemented, to read substantially as follows:

“(7) either an Opinion of Counsel or an Officers’ Certificate to the effect that:

(a) this Indenture constitutes, or, upon the delivery of, and/or the filing and/or recording in the proper places and manner of, the instruments of conveyance, assignment or transfer, if any, specified in said opinion or certificate, will constitute, a Lien on all the Property Additions to be made the basis of the authentication and delivery of such bonds, subject to no Lien thereon prior to the Lien of this Indenture except Permitted Liens and any other Liens of which the signer of said opinion or certificate has no actual knowledge and which do not appear on a specified lien search report received by said signer not more than five (5) Business Days prior to the date of said opinion or certificate; and

(b) the Company has corporate authority to operate such Property Additions;

(c) that the general nature and extent of Qualified Liens, and the principal amount of the then Outstanding Qualified Lien Bonds secured thereby, if any, mentioned in the accompanying Engineer’s Certificate, are correctly stated;

(9) copies of the instruments of conveyance, assignment and transfer, if any, and the lien search report, if any, specified in the opinion or certificate provided for in clause (7) above.”

SECTION 2.07. *Maintenance.* The Company reserves the right, without any consent, vote or other action by holders of any series of bonds subsequent to the Twenty-second Series or by holders of bonds of the Twenty-first Series with an Issue Date subsequent to November 1, 2016, to amend Section 38 of the Mortgage, as amended and supplemented, to read substantially as follows:

“Section 38. The Company shall cause (or, with respect to property owned in common with others, make reasonable effort to cause) the Mortgaged and Pledged Property, considered as a whole, to be maintained and kept in good condition, repair and working order and shall cause (or, with respect to property owned in common with others, make reasonable effort to cause) to be made such repairs, renewals, replacements, betterments and improvements thereof, as, in the judgment of the Company, may be necessary in order that the operation of the Mortgaged and Pledged Property, considered as a whole, may be conducted in accordance with common industry practice; provided, however, that nothing in this Section shall prevent the Company from discontinuing, or causing the discontinuance of, the operation and maintenance of any portion of the Mortgaged and Pledged Property if such discontinuance is in the judgment of the Company desirable in the conduct of its business; and provided, further,

that nothing in this Section shall prevent the Company from selling, transferring or otherwise disposing of, or causing the sale, transfer or other disposition of, any portion of the Mortgaged and Pledged Property in compliance with the other provisions of this Indenture.”

SECTION 2.08. *Excepted Property.* The Company reserves the right, without any consent, vote or other action by holders of any series of bonds subsequent to the Twenty-second Series or by holders of bonds of the Twenty-first Series with an Issue Date subsequent to November 1, 2016, to amend the paragraph on pages 10-11 of the Mortgage (and the corresponding provision in each supplemental indenture thereto) to add any one or more of the following types of property to the list of Excepted Property:

(a) any vessels, boats, barges, and other marine equipment;

(b) any personal property of such character that the perfection of a security interest therein or other Lien thereon is not governed by the Uniform Commercial Code as in effect in the jurisdiction in which the Company is organized or the property is located;

(c) any general intangibles, including computer software;

(d) any patents, patent licenses and other patent rights, patent applications, trade names, trademarks, copyrights and other intellectual property;

(e) any governmental and other licenses, permits and franchises (other than the Company's franchises, permits and licenses that are transferable and necessary for the operation of the Mortgaged and Pledged Property); or

(f) any unrecorded easements and rights of way.

SECTION 2.09. *Mergers into the Company.* The Company reserves the right, without any consent, vote or other action by holders of any series of bonds subsequent to the Twenty-second Series or by holders of bonds of the Twenty-first Series with an Issue Date subsequent to November 1, 2016, to amend Section 85 of the Mortgage, as amended and supplemented, to add a new paragraph reading substantially as follows:

“Nothing in this Indenture shall be deemed to prevent or restrict any consolidation or merger after the consummation of which the Company would be the surviving or resulting corporation or any conveyance or other transfer, or lease, of any part of the Mortgaged and Pledged Property which does not constitute the entirety or substantially the entirety of the Mortgaged and Pledged Property. Unless, in the case of a consolidation or merger described in the preceding sentence, an indenture supplemental hereto shall otherwise provide, this Indenture shall not become or be, or be required to become or be, a Lien upon any of the properties acquired by the Company in or as a result of such transaction or any improvements, extensions or additions to such properties or any renewals, replacements or substitutions of or for any part or parts thereof.”

SECTION 2.10. *Transfer of Less than Substantially All.* The Company reserves the right, without any consent, vote or other action by holders of any series of bonds subsequent to the Twenty-second Series or by holders of bonds of the Twenty-first Series with an Issue Date subsequent to November 1, 2016, to amend Section 85 of the Mortgage, as amended and supplemented, to add a new paragraph reading substantially as follows:

“A conveyance, transfer or lease by the Company of any part of the Mortgaged and Pledged Property shall not be deemed to constitute the conveyance, transfer or lease of all or substantially all of the Mortgaged and Pledged Property as an entirety for purposes of this Indenture if the Fair Value of the Mortgaged and Pledged Property retained by the Company exceeds the Reciprocal of the Bonding Ratio multiplied by the sum of the aggregate principal amount of all Outstanding bonds and any other outstanding debt of the Company secured by a purchase money lien that ranks equally with, or senior to, the bonds with respect to such Mortgaged and Pledged Property. Such Fair Value shall

be established by the delivery to the Corporate Trustee of an Independent Engineer's Certificate stating the Independent Engineer's opinion of such Fair Value as of a date not more than 90 days before or after such conveyance, transfer or lease. This Article XVI is not intended to limit the Company's conveyances, transfers or leases of less than substantially the entirety of the Mortgaged and Pledged Property or to create an inference that any conveyance, transfer or lease of any part of the Mortgaged and Pledged Property shall necessarily be deemed to constitute a conveyance, transfer or lease of all or substantially all of the Mortgaged and Pledged Property as an entirety for purposes of this Indenture where the Fair Value of the Mortgaged and Pledged Property retained by the Company is less than the Reciprocal of the Bonding Ratio multiplied by the aggregate principal amount of all Outstanding bonds and any other outstanding debt of the Company secured by a purchase money lien that ranks equally with, or senior to, the bonds with respect to such Mortgaged and Pledged Property."

SECTION 2.11. *Corporate Trustee Replacement.* The Company reserves the right, without any consent, vote or other action by holders of any series of bonds subsequent to the Twenty-second Series or by holders of bonds of the Twenty-first Series with an Issue Date subsequent to November 1, 2016, to amend Section 101 of the Mortgage, as amended and supplemented, to add a new paragraph reading substantially as follows:

"So long as no event which is, or after notice or lapse of time, or both, would become, a Default shall have occurred and be continuing, and except with respect to a Corporate Trustee appointed by the bondholders as provided in Section 102 hereof, if the Company shall have delivered to the Corporate Trustee (i) resolutions of the Board of Directors appointing a successor Corporate Trustee, effective as of a date specified therein, and (ii) an instrument of acceptance of such appointment, effective as of such date, by such successor Corporate Trustee in accordance with Section 104 hereof, the Corporate Trustee shall be deemed to have resigned as contemplated in the first sentence of Section 101 hereof, the successor Corporate Trustee shall be deemed to have been appointed by the Company pursuant to Section 102 hereof and such appointment shall be deemed to have been accepted as contemplated in Section 104 hereof, all as of such date, and all other provisions of Sections 101, 102 and 104 hereof shall be applicable to such resignation, appointment and acceptance except to the extent inconsistent with this paragraph."

SECTION 2.12. *Terms of New Series of Bonds.* The Company reserves the right, without any consent, vote or other action by holders of any series of bonds subsequent to the Twenty-second Series or by holders of bonds of the Twenty-first Series with an Issue Date subsequent to November 1, 2016, to amend Section 8 of the Mortgage, as amended and supplemented,

(A) to add the words "or an Authorized Officer" after the words "Board of Directors of the Company" in the first sentence of Section 8,

(B) to change the words "Resolution of the Board of Directors of the Company" in the second sentence of Section 8 to "Resolution, supplemental indenture or Officers' Certificate",

(C) to change the words "the Board of Directors" in the fifth sentence of Section 8 to "Resolution, supplemental indenture or Officers' Certificate",

(D) to add the words “or an Authorized Officer” after the words “Board of Directors” in the sixth sentence of Section 8 and in clause (c) of Section 8.

SECTION 2.13. *Investment of Money Held by Corporate Trustee.* The Company reserves the right, without any consent, vote or other action by holders of any series of bonds subsequent to the Twenty-second Series or by holders of bonds of the Twenty-first Series with an Issue Date subsequent to November 1, 2016, to amend Section 118 of the Mortgage, as amended and supplemented, (A) to delete the parenthetical in the first sentence of Section 118, (B) to delete the words “evidenced by a Resolution” in the first sentence of Section 118, and (C) to add a sentence after the first sentence in Section 118 reading substantially as follows:

“Any money which is held by the Corporate Trustee for the purpose of effecting the purchase, payment or redemption of any bonds issued hereunder, or the payment of any interest on such bonds, shall only be invested in bonds or other obligations maturing on or before the date specified for such purchase, payment or redemption.”

SECTION 2.14. *Officer's Certificates.* The Company reserves the right, without any consent, vote or other action by holders of any series of bonds subsequent to the Twenty-second Series or by holders of bonds of the Twenty-first Series with an Issue Date subsequent to November 1, 2016, (A) to change the words “Officers' Certificate” to “Officer's Certificate” wherever used in the Mortgage and any supplemental indenture thereto, including the amendments described in this Article II, and (B) to restate the definition of “Officers' Certificate” in Section 3 of the Mortgage, as amended and supplemented, to read substantially as follows:

“The term “Officer's Certificate” shall mean a certificate signed by an Authorized Officer. If and to the extent required by the provisions of Section 121 hereof, each such certificate shall include the statements provided for in said Section.”

SECTION 2.15. *Majority Vote or Consent.* The Company reserves the right, without any consent, vote or other action by holders of any series of bonds subsequent to the Twenty-second Series or by holders of bonds of the Twenty-first Series with an Issue Date subsequent to November 1, 2016, to amend Article XIX of the Mortgage, as amended and supplemented, to read substantially as follows:

“ARTICLE XIX.

Meetings and Consents of Bondholders.

SECTION 107. Modifications and alterations of this Indenture and/or of any indenture supplemental hereto and/or of the rights and obligations of the Company and/or of the rights of the holders of bonds and coupons issued hereunder may be made as provided in this Article XIX.

SECTION 108. The Corporate Trustee may at any time call a meeting of the holders of bonds of one or more, or all, series and it shall call such a meeting on written request of the Company, given pursuant to a Resolution of its Board of Directors, or a resolution of the holders of a majority or more in principal amount of the bonds of such series Outstanding hereunder, considered as one class, at the time of such request. In the event of the Corporate Trustee's failing for ten (10) days to call a meeting after being thereunto requested by the Company or bondholders as above set forth, holders of Outstanding bonds in the amount above specified in this Section or the Company, pursuant to Resolution of its Board of

Directors, may call such meeting. Every such meeting called by and at the instance of the Corporate Trustee shall be held in the Borough of Manhattan, The City of New York, or with the written approval of the Company, at any other place in the United States of America, and written notice thereof, stating the place and time thereof and in general terms the business to be submitted, shall be mailed by the Corporate Trustee not less than thirty (30) days before such meeting (a) to each registered holder of bonds of the series in respect of which such meeting is being called

then Outstanding hereunder addressed to him at his address appearing on the registry books, (b) to all other holders of bonds of such series then Outstanding hereunder the names and addresses of whom are preserved by the Corporate Trustee as required by the provisions of Section 43 hereof and (c) to the Company addressed to it at 220 N.W. Second Avenue, Portland, Oregon 97209 (or at such other address as may be designated by the Company from time to time), and, if any bonds of such series shall not be in fully registered form, shall be published by the Corporate Trustee at least once a week for four (4) successive calendar weeks immediately preceding the meeting, upon any secular day of each such calendar week, which need not be the same day of each week, in a Daily Newspaper, printed in the English language, and published and of general circulation in The City of New York; provided, however, that, if such notice by publication shall have been given, the mailing of such notice to any bondholders shall in no case be a condition precedent to the validity of any action taken at such meeting. Any meeting of holders of the bonds of one or more, or all, series shall be valid without notice if the holders of all bonds of such series then Outstanding hereunder are present in person or by proxy and if the Company and the Corporate Trustee are present by duly authorized representatives, or if notice is waived in writing before or after the meeting by the Company, the holders of all bonds of such series Outstanding hereunder and by the Corporate Trustee, or by such of them as are not present in person or by proxy.

SECTION 109. Officers and nominees of the Corporate Trustee and of the Company or their or its nominees may attend such meeting, but shall not as such be entitled to vote thereat. Attendance by bondholders may be in person or by proxy. In order that the holder of any bond payable to bearer and his proxy may attend and vote without producing his bond, the Corporate Trustee, with respect to any such meeting, may make and from time to time vary such regulations as it shall think fit for deposit of bonds with, (i) any bank or trust or insurance company, or (ii) any trustee, secretary, administrator or other proper officer of any pension, welfare, hospitalization, or similar fund or funds, or (iii) the United States of America, any Territory thereof, the District of Columbia, any State of the United States, any municipality in any State of the United States or any public instrumentality of the United States, any State or Territory, or (iv) any other person or corporation satisfactory to the Corporate Trustee, and for the issue to the persons depositing the same of certificates by such depositories entitling the holders thereof to be present and vote at any such meeting and to appoint proxies to represent them and vote for them at any such meeting in the same way as if the persons so present and voting, either personally or by proxy, were the actual bearers of the bonds in respect of which such certificates shall have been issued and any regulations so made shall be binding and effective. In lieu of or in addition to providing for such deposit, the Corporate Trustee may, in its discretion, permit such institutions to issue certificates stating that bonds were exhibited to them, which certificates shall entitle the holders thereof to vote at any meeting only if the bonds with respect to which they are issued are not produced at the meeting by any other person and are not at the time of the meeting registered in the name of any other person. Each such certificate shall state the date on which the bond or bonds in respect of which such certificate shall have been issued were deposited with or exhibited to such institution and the series, maturities and serial numbers of such bonds. A bondholder in any of the foregoing categories may sign such a certificate in his own behalf. In the event that two or more such certificates shall be issued with respect to any bond or bonds, the certificate bearing the latest date shall be recognized and be deemed to supersede any certificate or certificates previously issued with respect to such bond or bonds. If any such meeting shall have been called under

the provisions of Section 108 hereof, by bondholders or by the Company, and the Corporate Trustee shall fail to make regulations as above authorized, then regulations to like effect for such deposit, or exhibition of bonds and the issue of certificates by (i) any bank or trust or insurance company, or (ii) any trustee, secretary, administrator or other proper officer of any pension, welfare, hospitalization, or similar fund or funds, or (iii) by the United States of America, any Territory thereof,

the District of Columbia, any State of the United States, any municipality in any State of the United States or any public instrumentality of the United States, any State or Territory shall be similarly binding and effective for all purposes hereof if adopted or approved by the bondholders calling such meeting or by the Board of Directors of the Company, if such meeting shall have been called by the Company, provided that in either such case copies of such regulations shall be filed with the Corporate Trustee. A bondholder in any of the foregoing categories may sign such a certificate in his own behalf.

SECTION 110. Subject to the restrictions specified in Sections 109 and 113 hereof, any registered holder of bonds Outstanding hereunder and any holder of a certificate (not superseded) provided for in Section 109 hereof relating to bonds Outstanding hereunder, in either case of the series in respect of which a meeting shall have been called, shall be entitled in person or by proxy to attend and vote at such meeting as a holder of the bonds registered or certified in the name of such holder without producing such bonds. All others seeking to attend or vote at such meeting in person or by proxy must, if required by any authorized representative of the Corporate Trustee or the Company or by any other bondholder, produce the bonds claimed to be owned or represented at such meeting and every one seeking to attend or vote shall, if required as aforesaid, produce such further proof of bond ownership or personal identity as shall be satisfactory to the authorized representative of the Corporate Trustee, or if none be present then to the Inspectors of Votes hereinafter provided for. Proxies shall be witnessed or in the alternative may (a) have the signature guaranteed by a bank or trust company or a registered dealer in securities participating in a recognized signature guarantee medallion program, (b) be acknowledged before a Notary Public or other officer authorized to take acknowledgements, or (c) have their genuineness otherwise established to the satisfaction of the Inspector of Votes. All proxies and certificates presented at any meeting shall be delivered to said Inspectors of Votes and filed with the Corporate Trustee.

SECTION 111. Persons nominated by the Corporate Trustee if it is represented at the meeting shall act as temporary Chairman and Secretary, respectively, of the meeting, but if the Corporate Trustee shall not be represented or shall fail to nominate such persons or if any person so nominated shall not be present, the bondholders and proxies present shall by a majority vote of bonds represented elect another person or other persons from those present to act as temporary Chairman and/or Secretary. A permanent Chairman and a permanent Secretary of such meeting shall be elected from those present by the bondholders and proxies present by a majority vote of bonds represented. The Corporate Trustee, if represented at the meeting, shall appoint two Inspectors of Votes who shall decide as to the right of anyone to vote and shall count all votes cast at such meeting, except votes on the election of a Chairman and Secretary, both temporary and permanent, as aforesaid, and who shall make and file with the permanent Secretary of the meeting their verified written report in duplicate of all such votes so cast at said meeting. If the Corporate Trustee shall not be represented at the meeting or shall fail to nominate such Inspectors of Votes or if either Inspector of Votes fails to attend the meeting, the vacancy shall be filled by appointment by the permanent Chairman of the meeting.

SECTION 112. The holders of a majority in aggregate principal amount of the bonds Outstanding hereunder of the series with respect to which a meeting shall have been called as hereinbefore provided, considered as one class, shall constitute a quorum for a meeting of

holders of bonds of such series; provided, that if any action is to be taken at such meeting which this Indenture expressly provides may be taken by the holders of a specified percentage which is less than a majority in principal amount of the bonds of such series Outstanding hereunder, considered as one class, then the holders of such specified percentage in principal amount of the bonds of such series Outstanding hereunder, considered as one class, shall constitute a quorum. In the absence of a quorum within one hour of the time appointed for any such meeting, the meeting shall, if convened at the request of

holders of bonds of such series, be dissolved. In any other case the meeting may be adjourned for such period or periods as may be determined and announced by the chairman of the meeting prior to the adjournment thereof.

SECTION 113. Any modification or alteration of this Indenture and/or of any indenture supplemental hereto and/or of the rights and obligations of the Company and/or the rights of the holders of bonds and/or coupons issued hereunder in any particular may be made at a meeting of bondholders duly convened and held in accordance with the provisions of this Article, but only by resolution duly adopted by the affirmative vote of the holders of a majority in principal amount of the bonds Outstanding hereunder, considered as one class (or, if such modification or alteration shall materially adversely affect the holders of bonds of one or more, but less than all, series then Outstanding hereunder, then the affirmative vote only of the holders of a majority in aggregate principal amount of the bonds of the series adversely affected in any material respect then Outstanding hereunder, considered as one class), when such meeting is held, and in every case approved by Resolution of the Board of Directors of the Company as hereinafter specified; provided, however, that no such modification or alteration shall, without the consent of the holder of any bond issued hereunder affected thereby, permit (1) the extension of the maturity of the principal of, or interest on, such bond, or (2) the reduction in such principal or the rate of interest thereon or any other modification in the terms of payment of such principal or interest, or (3) the creation of any lien ranking prior to, or on a parity with, the Lien of this Indenture with respect to any of the Mortgaged and Pledged Property, or (4) the deprivation of any non-assenting bondholder of a lien upon the Mortgaged and Pledged Property for the security of his bonds (subject only to Excepted Encumbrances) or (5) the reduction of the percentage required by the provisions of this Section for the taking of any action under this Section with respect to any bond Outstanding hereunder. For all purposes of this Article, the Trustees shall be entitled to rely upon an Opinion of Counsel with respect to the extent, if any, as to which any action taken at such meeting affects the rights under this Indenture or under any indenture supplemental hereto of any holders of bonds then Outstanding hereunder.

Bonds owned and/or held by and/or for account of and/or for the benefit or interest of the Company, or any corporation of which the Company shall own twenty-five per centum (25%) or more of the outstanding voting stock, shall not be deemed Outstanding for the purpose of any vote or of any calculation of bonds Outstanding in Article XVI hereof or in this Article XVIII or for the purpose of the quorum provided for in Section 112 of this Article; provided, however, that bonds so owned or held which have been pledged in good faith may be regarded as Outstanding for purposes of this paragraph if the pledgee establishes to the satisfaction of the Corporate Trustee the pledgee's right to vote or give consents with respect to such bonds and that the pledgee is not the Company or a corporation of which the Company shall own twenty-five per centum (25%) or more of the outstanding voting stock. For all purposes of this Indenture, the Corporate Trustee, the Chairman and Secretary of any meeting held pursuant to the provisions of this Article XIX and the Inspectors of Votes at any such meeting shall (unless the fact is challenged at such meeting by any holder of bonds Outstanding hereunder entitled to vote at such meeting and a contrary fact is established) be entitled conclusively to rely upon a notification in writing by an officer of the Company, specifying the principal amount of bonds Outstanding hereunder owned by or held by or for the account of or for the benefit or interest of the Company or any corporation of which the

Company shall own twenty-five per centum (25%) or more of the outstanding voting stock, or stating that no such bonds are so owned or held. In case the meeting shall have been called otherwise than on the written request of the Company, the Corporate Trustee shall be entitled conclusively to assume that none of the bonds Outstanding hereunder is so owned or held unless a notification by the Company is furnished as in

this paragraph provided or unless the fact is challenged at such meeting by any holder of bonds Outstanding hereunder and a contrary fact is established.

SECTION 114. A record in duplicate of the proceedings of each meeting of bondholders shall be prepared by the permanent Secretary of the meeting and shall have attached thereto the original reports of the Inspectors of Votes, and affidavits by one or more persons having knowledge of the facts showing a copy of the notice of the meeting, and showing that said notice was mailed and published as provided in Section 108 hereof. Such record shall be signed and verified by the affidavit of the permanent Chairman and the permanent Secretary of the meeting, and one duplicate thereof shall be delivered to the Company and the other to the Corporate Trustee for preservation by the Corporate Trustee. Any record so signed and verified shall be proof of the matters therein stated, and if such record shall also be signed and verified by the affidavit of a duly authorized representative of the Corporate Trustee, such meeting shall be deemed conclusively to have been duly convened and held and such record shall be conclusive, and any resolution or proceeding stated in such record to have been adopted or taken, shall be deemed conclusively to have been duly adopted or taken by such meeting. A true copy of any resolution adopted by such meeting shall be mailed by the Corporate Trustee (a) to each registered holder of bonds of the series adversely affected in any material respect by such resolution then Outstanding addressed to him at his address appearing on the registry books and (b) to all other holders of bonds then Outstanding hereunder, the names and addresses of whom are then preserved by the Corporate Trustee pursuant to the provisions of Section 43 hereof, and proof of such mailing by the affidavit of some person having knowledge of the fact shall be filed with the Corporate Trustee, but failure to mail copies of such resolution as aforesaid shall not affect the validity thereof. No such resolution shall be binding until and unless such resolution is approved by Resolution of the Board of Directors of the Company, of which such Resolution of approval, if any, it shall be the duty of the Company to file a copy certified by the Secretary or an Assistant Secretary of the Company with the Corporate Trustee, but if such Resolution of the Board of Directors of the Company is adopted and a certified copy thereof is filed with the Corporate Trustee, the resolution so adopted by such meeting shall (to the extent permitted by law) be deemed conclusively to be binding upon the Company, the Trustees and the holders of all bonds and coupons issued hereunder, at the expiration of sixty (60) days after such filing, except in the event of a final decree of a court of competent jurisdiction setting aside such resolution, or annulling the action taken thereby in a legal action or equitable proceeding for such purposes commenced within such sixty (60) day period; provided, however, that no such resolution of the bondholders, or of the Company, shall in any manner be so construed as to change or modify any of the rights, immunities, or obligations of the Trustees or either of them without their, its or his written assent thereto.

SECTION 115. Bonds authenticated and delivered after the date of any bondholders' meeting may bear a notation in form approved by the Corporate Trustee as to the action taken at meetings of bondholders theretofore held, and upon demand of the holder of any bond Outstanding at the date of any such meeting and presentation of his bond for the purpose at the principal office of the Corporate Trustee, the Company shall cause suitable notation to be made on such bond by endorsement or otherwise as to any action taken at any meeting of bondholders theretofore held. If the Company or the Corporate Trustee shall so determine, new bonds so modified as in the opinion of the Corporate Trustee and the Board of Directors

of the Company to conform to such bondholders' resolution shall be prepared, authenticated and delivered, and upon demand of the holder of any bond then Outstanding and affected thereby shall be exchanged without cost to such bondholders for bonds then Outstanding hereunder upon surrender of such bonds with all unmatured coupons, if any, appertaining thereto. The Company or the Corporate Trustee may require bonds Outstanding to be presented for notation or exchange as aforesaid if either shall see fit to do so. Instruments supplemental to this Indenture

embodying any modification or alteration of this Indenture or of any indenture supplemental hereto made at any bondholders' meeting and approved by Resolution of the Board of Directors of the Company, as aforesaid, may be executed by the Trustees and the Company and upon demand of the Corporate Trustee, or if so specified in any resolution adopted by any such bondholders' meeting, shall be executed by the Company and the Trustees.

Any instrument supplemental to this Indenture executed pursuant to the provisions of this Section or otherwise, shall comply with all applicable provisions of the Trust Indenture Act of 1939 as in force on the date of the execution of such supplemental indenture.

SECTION 116. (A) Anything in this Article XIX contained to the contrary notwithstanding, the Corporate Trustee shall receive the written consent (in any number of instruments of similar tenor executed by bondholders or by their attorneys appointed in writing or in the supplemental indenture or supplemental indentures creating such series of bonds) of the holders of a majority in principal amount of the bonds Outstanding hereunder, considered as one class (or, if any action proposed to be taken shall materially adversely affect the holders of bonds of one or more, but less than all, series then Outstanding hereunder, then the consent only of the holders of a majority in aggregate principal amount of bonds of the series so adversely affected in any material respect then Outstanding hereunder, considered as one class), at the time the last such needed consent is delivered to the Corporate Trustee, in lieu of the holding of a meeting pursuant to this Article XIX and in lieu of all action at such a meeting and with the same force and effect as a resolution duly adopted in accordance with the provisions of Section 113 hereof.

(B) Instruments of consent shall be witnessed or in the alternative may (a) have the signature guaranteed by a bank or trust company or a registered dealer in securities participating in a recognized signature guarantee medallion program, (b) be acknowledged before a Notary Public or other officer authorized to take acknowledgments, or (c) have their genuineness otherwise established to the satisfaction of the Corporate Trustee.

The amount of bonds payable to bearer, and the series and serial numbers thereof, held by a person executing an instrument of consent (or whose attorney has executed an instrument of consent in his behalf), and the date of his holding the same, may be proved by exhibiting the bonds to and obtaining a certificate executed by (i) any bank or trust or insurance company organized under the laws of the United States of America or of any State thereof, or (ii) any trustee, secretary, administrator or other proper officer of any pension, welfare, hospitalization or similar fund or funds, or (iii) the United States of America, any Territory thereof, the District of Columbia, any State of the United States, any municipality in any State of the United States or any public instrumentality of the United States, or of any State or of any Territory, or (iv) any other person or corporation satisfactory to the Corporate Trustee. A bondholder in any of the foregoing categories may sign a certificate in his own behalf.

Each such certificate shall be dated and shall state in effect that as of the date thereof a coupon bond or bonds bearing a specified serial number or numbers was exhibited to the signer of such certificate. The holding by the person named in any such certificate of any bonds specified therein shall be presumed to continue unless (1) any certificate bearing a later date issued in respect of the same bond shall be produced, (2) the bond specified in such

certificate (or any bond or bonds issued in exchange or substitution for such bond) shall be produced, or (3) the bond specified in such certificate shall be registered as to principal in the name of another holder or shall have been surrendered in exchange or a fully registered bond registered in the name of another holder. The

Corporate Trustee may nevertheless in its discretion require further proof in cases where it deems further proof desirable. The ownership of registered bonds shall be proved by the registry books.

(C) Until such time as the Corporate Trustee shall receive the written consent of the necessary per centum in principal amount of the bonds required by the provisions of subsection (A) above for action contemplated by such consent, any holder of a bond, the serial number of which is shown by the evidence to be included in the bonds the holders of which have consented to such action, may, by filing written notice with the Corporate Trustee at its principal office and upon proof of holding as provided in subsection (B) above, revoke such consent so far as it concerns such bond unless such consent states that it shall be irrevocable or is set forth in the supplemental indenture creating such series of bonds. Except as aforesaid, any such action taken by the holder of any bond shall be conclusive and binding upon such holder and upon all future holders of such bond (and any bond issued in lieu thereof or exchanged therefor), irrespective of whether or not any notation of such consent is made upon such bond, and in any event any action taken by the holders of the percentage in aggregate principal amount of the bonds specified in subsection (A) above in connection with such action shall be conclusively binding upon the Company, the Corporate Trustee and the holders of all the bonds.”

SECTION 2.16. *Amendments without the Consent of Bondholders.* The Company reserves the right, without any consent, vote or other action by holders of any series of bonds subsequent to the Twenty-second Series or by holders of bonds of the Twenty-first Series with an Issue Date subsequent to November 1, 2016, to amend Section 120 of the Mortgage, as amended and supplemented, to read substantially as follows:

“SECTION 120. Anything in this Indenture to the contrary notwithstanding, without the consent of any holders of bonds, the Company and the Trustees, at any time and from time to time, may enter into one or more indentures supplemental hereto, in form satisfactory to the Trustees, for any of the following purposes:

(a) to evidence the succession of another corporation to the Company and the assumption by any such successor of the covenants of the Company herein and in the bonds, all as provided in Article XVI hereof, or

(b) to add one or more covenants of the Company or other provisions for the benefit of all holders of the bonds or for the benefit of the holders of, or to remain in effect only so long as there shall be Outstanding, bonds of one or more specified series, and to make the occurrence of a default in the performance of any of such additional covenants an additional “Default” under Section 65 permitting the enforcement of all or any of the several remedies provided in this Indenture, as herein set forth; provided, however, that in respect of any such additional covenant, such supplemental indenture may provide for a particular period of grace after default (which period may be shorter or longer than those allowed in the case of other defaults) or may provide for an immediate enforcement upon such default, or may (subject to the provisions of applicable law) limit the remedies available to the Trustees upon such default; or to provide that the occurrence of one or more specified events shall constitute additional

“Defaults” under Section 65 as if set forth therein, or to surrender any right or power herein conferred upon the Company, which additional “Default” or surrender may be limited so as to remain in effect only so long as bonds of one or more specified series shall remain Outstanding; or

(c) to correct or amplify the description of any property at any time subject to the Lien of this Indenture, or better to assure, convey and confirm unto the Trustees any property

subject or required to be subjected to the Lien of this Indenture, or to subject to the Lien of this Indenture additional property; or

(d) to change or eliminate any provision of this Indenture or to add any new provision to this Indenture; provided, however, that no such change, elimination or addition shall adversely affect the interests of the holders of bonds of any series in any material respect; or

(e) to establish the form or terms of bonds of any series as contemplated by Article II of this Indenture; or

(f) to provide for the procedures required to permit the Company to utilize, at its option, a non-certificated system of registration for all or any series of bonds; or

(g) to change any place or places (within the United States of America) where (1) the principal of and premium, if any, and interest, if any, on all or any series of bonds shall be payable, (2) all or any series of bonds may be surrendered for registration of transfer, (3) all or any series of bonds may be surrendered for exchange and (4) notices and demands to or upon the Company in respect of all or any series of bonds and this Indenture may be served; or

(h) to cure any ambiguity, to correct or supplement any provision herein which may be defective or inconsistent with any other provision herein; or to make any other changes to the provisions hereof or to add other provisions with respect to matters or questions arising under this Indenture, provided that such other changes or additions shall not adversely affect the interests of the holders of bonds of any series in any material respect.

Without limiting the generality of the foregoing, if the Trust Indenture Act of 1939, as in effect at any time and from time to time,

(x) shall require one or more changes to any provisions hereof or the inclusion herein of any additional provisions, or shall by operation of law be deemed to effect such changes or incorporate such provisions by reference or otherwise, this Indenture shall be deemed to have been amended so as to conform to the Trust Indenture Act of 1939 as then in effect, and the Company and the Trustees may, without the consent of any holders of bonds, enter into an indenture supplemental hereto to evidence such amendment hereof; or

(y) shall permit one or more changes to, or the elimination of, any provisions hereof which shall theretofore have been required by the Trust Indenture Act of 1939 to be contained herein or are contained herein to reflect any provisions of the Trust Indenture Act of 1939, this Indenture shall be deemed to have been amended to effect such changes or elimination, and the Company and the Trustees may, without the consent of any holders of bonds, enter into an indenture supplemental hereto to evidence such amendment hereof, provided that the Indenture shall not be amended as provided in this clause (y) so as to adversely affect the interests of the holders of bonds of any series in any material respect.”

SECTION 2.17. *Excepted Encumbrances*. The Company reserves the right, without any consent, vote or other action by holders of any series of bonds subsequent to the Twenty-second Series or by holders of bonds of the Twenty-first Series with an Issue Date subsequent to November 1, 2016, (A) to delete the definition of “Excepted Encumbrances” in Section 6 of the Mortgage, as amended and supplemented, and

(B) to change the words “Excepted Encumbrances” wherever used in the Mortgage or in any supplemental indenture, including the amendments described in this Article II, to “Permitted Liens”.

SECTION 2.18. *Release of Company after Transfer of Substantially All of the Mortgaged Property.* The Company reserves the right, without any consent, vote or other action by holders of any series of bonds subsequent to the Twenty-second Series or by holders of bonds of the Twenty-first Series with an Issue Date subsequent to November 1, 2016, to amend Section 86 of the Mortgage to add a new paragraph reading substantially as follows:

“In case the Company, as permitted by Section 85 hereof, shall convey or transfer, subject to the Lien of this Indenture, all or substantially all of the Mortgaged and Pledged Property as an entirety to a successor corporation, the indenture described above in this Section may also provide for the release and discharge of the Company from all obligations under this Indenture or any bonds issued hereunder which are assumed by such successor corporation.”

SECTION 2.19. *Easements, Ground Leases, Rights-of-Way.* The Company reserves the right, without any consent, vote or other action by holders of any series of bonds subsequent to the Twenty-second Series or by holders of bonds of the Twenty-first Series with an Issue Date subsequent to November 1, 2016, to amend Section 58 of the Mortgage, as amended and supplemented, to restate clause (2) thereof to read substantially as follows:

“(2) (a) cancel or make changes or alterations in or substitutions of any and all right of way grants; (b) sell or otherwise dispose of, free from the Lien of this Indenture, cancel, make changes or alterations in or substitutions of any and all contracts, leases, operating agreements, obligations, securities, accounts receivable, choses in action, and other rights, interests and property not constituting Property Additions; and (c) grant, free from the Lien of this Indenture, easements, ground leases or rights-of-way in, upon, over and/or across the property or rights-of-way of the Company for the purpose of roads, pipe lines, transmission lines, distribution lines, communication lines, railways, removal or transportation of coal, lignite, gas, oil or other minerals or timber, and other like purposes, or for the joint or common use of real property, rights-of-way, facilities and/or equipment; provided, however, that such grant shall not materially impair the use of the property or rights-of-way for the purposes for which such property or rights-of-way are held by the Company; and”

SECTION 2.20. *Elimination of Five Year Limit on Property Additions Used for Releases.* The Company reserves the right, without any consent, vote or other action by holders of any series of bonds subsequent to the Twenty-second Series or by holders of bonds of the Twenty-first Series with an Issue Date subsequent to November 1, 2016, to amend clause (b) of subdivision (4) of Section 59 of the Mortgage, as amended and supplemented, to delete the words “that no such application for release may be based in whole or in part upon Property Additions acquired, made or constructed more than five years prior to the last day of the calendar month immediately preceding the date of such application, and provided, further,”:

SECTION 2.21. *Releases Based on Retired Bonds.* The Company reserves the right, without any consent, vote or other action by holders of any series of bonds subsequent to the Twenty-second Series or by holders of bonds of the Twenty-first Series with an Issue Date subsequent to November

1, 2016, to amend clause (c) of subdivision (4) of Section 59 of the Mortgage, as amended and supplemented, to read substantially as follows:

“(c) the principal amount of each bond or fraction of bond to the authentication and delivery of which the Company shall be entitled under the provisions of Section 26 or the Reciprocal of the Bonding Ratio multiplied by the principal amount of each bond or fraction of bond to the authentication

and delivery of which the Company shall be entitled under the provisions of Section 29 hereof, by virtue of compliance with all applicable provisions of said Section 26 or Section 29, as the case may be (except as hereinafter in this Section otherwise provided); provided, however, that (except as hereinafter in this Section otherwise provided) the application for such release shall operate as a waiver by the Company of such right to the authentication and delivery of each such bond or fraction thereof on the basis of which right such property is released and to such extent no such bond or fraction thereof may thereafter be authenticated and delivered hereunder, and any Corresponding Retired Bonds or Corresponding Qualified Lien Bonds, as hereinafter defined, shall be deemed to have been made the basis of the release of such property; for purposes of this clause (c), the following definitions shall apply:

The term “Corresponding Retired Bond” shall mean the bond or fraction of a bond selected by the Company to serve as the basis under the provisions of Section 29 of the Mortgage for such right to the authentication and delivery of bond(s) or fraction of a bond so waived; and

The term “Corresponding Qualified Lien Bond” shall mean the Qualified Lien Bond selected by the Company to serve as the basis under the provisions of Section 26 of the Mortgage for such right to the authentication and delivery of bond(s) or fraction of a bond so waived.”

SECTION 2.22. *Releases Based on Purchase Money Mortgage Obligations.* The Company reserves the right, without any consent, vote or other action by holders of any series of bonds subsequent to the Twenty-second Series or by holders of bonds of the Twenty-first Series with an Issue Date subsequent to November 1, 2016, to amend Section 59 of the Mortgage, as amended and supplemented, to delete the clause at the end of subdivision (4) beginning with the words “provided, however, that (i) no obligations ...” and ending with the words “... at such time Outstanding under this Indenture” and substituting therefor substantially the following:

“provided, however, that no obligations secured by a purchase money mortgage upon any property being released from the Lien hereof shall be used as a credit in any application for such release unless the Company shall deliver to the Trustees a certificate or opinion of an engineer, appraiser or other expert as to the fair value of such purchase money mortgage obligations to the Company, and provided further, that if the fair value to the Company of such purchase money mortgage obligations and of all other securities (other than bonds authenticated and delivered hereunder) made the basis of any authentication and delivery of bonds hereunder, the withdrawal of any cash constituting part of the trust estate hereunder, or the release of any property or securities from the Lien hereof since the commencement of the then calendar year, as set forth in the certificates or opinions required by this clause, is ten per centum (10%) or more of the aggregate principal amount of the bonds at the time Outstanding under this Indenture, such certificate or opinion shall be made by an independent engineer, appraiser, or other expert; but such a certificate of an independent engineer, appraiser, or other expert shall not be required with respect to any purchase money mortgage obligations so deposited, if the fair value thereof to the Company as set forth in the certificate or opinion required by this clause is less than twenty-five thousand Dollars (\$25,000) or less than one per centum (1%) of the aggregate principal amount of bonds at the time Outstanding under this Indenture.”

SECTION 2.23. *Mineral Rights*. The Company reserves the right, without any consent, vote or other action by holders of any series of bonds subsequent to the Twenty-second Series or by holders of bonds of the Twenty-first Series with an Issue Date subsequent to November 1, 2016, to amend Section 3 of the Mortgage, as amended and supplemented, to add the following definition:

The term “mineral rights”, for purposes of the Mortgage, as amended and supplemented, shall mean rights to extract minerals that naturally exist under or on real property (and associated express and implied rights), but shall exclude any rights or other property constructed, acquired or held by the Company primarily for the purpose of storing and withdrawing gas that has been injected into, or may from time to time be injected into, storage reservoirs or other facilities located on or under real property, whether or not such rights or other property constitute “mineral rights” under applicable law, whether or not such storage reservoirs or other facilities are naturally existing or were constructed, and whether or not such storage reservoirs or other facilities contain some gas that naturally exists in such reservoir or facility.

ARTICLE III.

Consent to Amendments.

SECTION 3.01 Each initial and future holder of bonds of the Twenty-first Series with an Issue Date subsequent to November 1, 2016, by its acquisition of an interest in such bonds, irrevocably (a) consents to the amendments set forth in Article II of this Twenty-second Supplemental Indenture, in each case without any other or further action by any holder of such bonds, and (b) designates the Corporate Trustee, and its successors, as its proxy with irrevocable instructions to vote and deliver written consents on behalf of such holder in favor of such amendments at any bondholder meeting, in lieu of any bondholder meeting, in any consent solicitation or otherwise. The terms of the bonds of the Twenty-first Series with an Issue Date subsequent to November 1, 2016, as set forth in the Twentieth Supplemental Indenture, are hereby amended to include such consent and designation.

ARTICLE IV.

Miscellaneous Provisions.

SECTION 4.01 Subject to the amendments provided for in this Twenty-second Supplemental Indenture, the terms defined in the Mortgage, as heretofore supplemented, shall, for all purposes of this Twenty-second Supplemental Indenture, have the meanings specified in the Mortgage, as heretofore supplemented.

SECTION 4.02 The Trustee hereby accepts the trusts hereby declared, provided, created or supplemented, and agree to perform the same upon the terms and conditions herein and in the Mortgage, as heretofore supplemented, set forth, including the following:

The Trustee shall not be responsible in any manner whatsoever for or in respect of the validity or sufficiency of this Twenty-second Supplemental Indenture or for or in respect of the recitals contained herein, all of which recitals are made by the Company solely. In general each and every term and condition contained in Article XVII of the Mortgage shall apply to and form part of this Twenty-second Supplemental Indenture with the same force and effect as if the same were herein set forth in full, with such omissions, variations and insertions, if any, as may be appropriate to make the same conform to the provisions of this Twenty-second Supplemental Indenture.

SECTION 4.03 Whenever in this Twenty-second Supplemental Indenture any of the parties hereto is named or referred to, this shall, subject to the provisions of Articles XVI and XVII of the Mortgage, be deemed to include the successors or assigns of such party, and all the covenants and agreements in this

Twenty-second Supplemental Indenture contained by or on behalf of the Company or by or on behalf of the Trustee shall bind and inure to the benefit of the respective successors and assigns of such parties whether so expressed or not.

SECTION 4.04 Nothing in this Twenty-second Supplemental Indenture, expressed or implied, is intended, or shall be construed, to confer upon, or to give to, any person, firm or corporation, other than the parties hereto and the holders of the bonds and coupons outstanding under the Mortgage, any right, remedy, or claim under or by reason of this Twenty-second Supplemental Indenture or any covenant, condition, stipulation, promise or agreement hereof, and all the covenants, conditions, stipulations, promises and agreements by or on behalf of the Company as set forth in this Twenty-second Supplemental Indenture shall be for the sole and exclusive benefit of the parties hereto, and of the holders of the bonds and of the coupons outstanding under the Mortgage.

SECTION 4.05 Except to the extent specifically provided herein, no provision of this Twenty-second Supplemental Indenture is intended to reinstate any provisions in the Mortgage which were amended and superseded by the amendments to the Trust Indenture Act of 1939 effective as of November 15, 1990.

SECTION 4.06 This Twenty-second Supplemental Indenture has been executed in several identical counterparts, each of which shall be an original and all of which shall constitute but one and the same instrument.

IN WITNESS WHEREOF, Northwest Natural Gas Company, has caused its corporate name to be hereunto affixed, and this instrument to be signed and sealed by its President or one of its Vice Presidents, and its corporate seal to be attested by its Secretary or one of its Assistant Secretaries for and in its behalf on the 1st day of November, 2016, as of November 1, 2016, in Portland, Oregon; Deutsche Bank Trust Company Americas, has caused its corporate name to be hereunto affixed, and this instrument to be signed and sealed by its Vice Presidents or its Assistant Vice Presidents and its corporate seal to be attested by one of its Vice Presidents, Assistant Vice Presidents, one of its Assistant Secretaries or one of its Associates on the 1st day of November, 2016, as of November 1, 2016, in The City of New York.

NORTHWEST NATURAL GAS COMPANY

By /s/ MardiLyn Saathoff
MardiLyn Saathoff
Senior Vice President, Regulation and General Counsel

Attest:

/s/ Shawn M. Filippi
Shawn M. Filippi
Vice President, Chief Compliance Officer
and Corporate Secretary

Executed, sealed and delivered by
NORTHWEST NATURAL GAS COMPANY
in the presence of:

/s/ Chu Lee
Chu Lee

/s/ Elissa Ann Twombly
Elissa Ann Twombly

