

106267

BOOK 112 PAGE 95

EXECUTED IN 40 COUNTERPARTS OF
WHICH THIS IS COUNTERPART NO. 31

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

FILED FOR RECORD
SKENNER, CO. WASH.
BY *Northwest Nat'l Gas*
DEC 2 10 49 AM '88
[Signature]
CARY H. OLSON

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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:

County

Benton
Clackamas
Clatsop
Columbia
Coos
Douglas
Hood River
Lane
Lincoln
Linn
Marion
Multnomah
Polk
Tillamook
Wasco
Washington
Yamhill

Office

Secretary

County

Clark
Klickitat
Skamania

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OREGON

Real Property Mortgage Records

County	Date Recorded	Book, Film or Reel	Page
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

Office	Date Filed for Record	File No.
Secretary of State	July 3, 1986	K 52983

WASHINGTON

Real Property Mortgage Records

County	Date Recorded	Book, Film or Reel	Page
Clark	July 3, 1986	399	1
Klickitat	July 3, 1986	138	112
Skamania	July 3, 1986	101	752

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Filed as a Financing Statement

Office	Date Filed for Record	File Number
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:

Series	Principal Amount Outstanding
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 enrolling 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

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

in the Mortgage
Sixteenth Supplemental Indenture

all the terms and conditions contained herein, and before default under the obligation of the benefit of the trust, in the said time of the specifically Trustees stated to

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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.

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

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

request for a Qualified bond (other than a bond for a bondholder tenant, to the bond(s) evidencing and appropriate request by of request request re a form satisfactory redemption presented of the principal together with

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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-

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.

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. Beck
Senior Vice President,
Finance and Administration

Attest:

Virginia M. Vance
Assistant Secretary

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

Susan R. Beuchamp

Leslie B. Alden



-18-

BANKERS TRUST COMPANY, as Trustee,

By *Barbara J. Jones*
Assistant Vice President

Attest:

Vida Jones
Assistant Secretary

Y V B

Stanley Burg
STANLEY BURG, as Trustee

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

J. Richard [illegible]

Eric M. Hammer

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Trustee,

STATE OF OREGON)
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November 23, A.D. 1988.

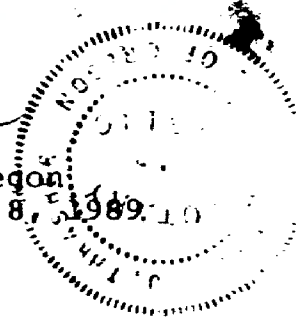
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Before me personally appeared ^{Senior} BRUCE R. DEBOLT, who, being duly sworn, did say that he is Vice President, Finance and Administration, of NORTHWEST NATURAL GAS COMPANY and that the seal affixed to the foregoing instrument is the corporate seal 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.

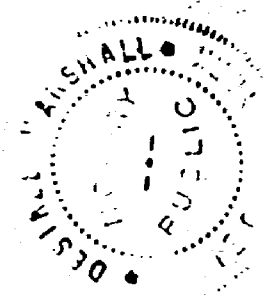
Before me personally appeared BARBARA A. JOINER, who, being duly sworn, did say that she is an Assistant Vice President of BANKERS TRUST COMPANY and that the seal affixed to the foregoing instrument is the corporate seal of said Corporation and that said instrument was signed and sealed in behalf of 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
 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)
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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

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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