

BEFORE THE
WASHINGTON UTILITIES & TRANSPORTATION COMMISSION

UG-__
GENERAL RATE APPLICATION
OF
NORTHWEST NATURAL GAS COMPANY

December 18, 2020

Direct Exhibit of Brody J. Wilson

COST OF CAPITAL

Exh. BJW-5

NORTHWEST NATURAL GAS COMPANY
EMBEDDED COST OF LONG-TERM DEBT CAPITAL AT
September 30, 2020

#	Coupon Rate	Description of Issue	Date Issued	Maturity Date	9/30/2020 Years to Maturity	Premium or Discount		Underwriter's Commission		Expense of Issue		Net Proceeds		Original Term to Maturity Yrs.	Cost of Money (Bond Table)	Annual Cost Outstanding Debt	Check step			
						Outstanding	Offered	Per \$ 100 Principal Amount	Per \$ 100 Principal Amount	Per \$ 100 Principal Amount	Per \$ 100 Principal Amount	Per \$ 100 Principal Amount	Per \$ 100 Principal Amount							
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)					
Medium-Term Notes																				
First Mortgage Bonds:																				
1	9.050%	9.050% Series	8/13/1991	8/13/2021	0.9	10,000,000	10,000,000	0	0.00	75,000	0.750	40,333	0.40	9,884,667	98.847	30	9.163%	916,300	9.163%	0.000%
2	3.176%	3.176% Series	9/12/2011	9/15/2021	1.0	50,000,000	50,000,000	0	0.00	312,500	0.625	292,655	0.59	49,394,845	98.790	10	3.319%	1,659,500	3.319%	0.000%
3	3.542%	3.542% Series	8/19/2013	8/19/2023	2.9	50,000,000	50,000,000	0	0.00	312,500	0.625	325,679	0.65	49,361,821	98.724	10	3.696%	1,848,000	3.696%	0.000%
4	5.620%	5.620% Series	11/21/2003	11/21/2023	3.1	40,000,000	40,000,000	0	0.00	372,588	0.931	2,952,850	[6] 7.38	36,674,562	91.686	20	6.360%	2,544,000	6.360%	0.000%
5	7.720%	7.720% Series	9/6/2000	9/1/2025	4.9	20,000,000	20,000,000	0	0.00	150,000	0.750	1,136,261	[4] 5.68	18,713,739	93.569	25	8.336%	1,667,200	8.336%	0.000%
6	6.520%	6.520% Series	12/1/1995	12/1/2025	5.2	10,000,000	10,000,000	0	0.00	62,500	0.625	27,646	0.28	9,909,854	99.099	30	6.589%	658,900	6.589%	0.000%
7	7.050%	7.050% Series	10/15/1996	10/15/2026	6.0	20,000,000	20,000,000	0	0.00	125,000	0.625	50,940	0.25	19,824,060	99.120	30	7.121%	1,424,200	7.121%	0.000%
8	3.211%	3.211% Series	12/5/2016	12/5/2026	6.2	35,000,000	35,000,000	0	0.00	218,750	0.625	288,003	0.82	34,493,247	98.552	10	3.383%	1,184,050	3.383%	0.000%
9	7.000%	7.000% Series	5/20/1997	5/21/2027	6.6	20,000,000	20,000,000	0	0.00	125,000	0.625	28,906	0.14	19,846,094	99.230	30	7.062%	1,412,400	7.062%	0.000%
10	2.822%	2.822% Series	9/13/2017	9/13/2027	7.0	25,000,000	25,000,000	0	0.00	150,000	0.600	159,885	0.64	24,690,115	98.760	10	2.966%	741,500	2.966%	0.000%
11	6.650%	6.650% Series	11/10/1997	11/10/2027	7.1	19,700,000	19,700,000	0	0.00	125,000	0.635	37,800	[8] 0.19	19,537,200	99.174	30	6.714%	1,322,658	6.714%	0.000%
12	6.650%	6.650% Series	6/1/1998	6/1/2028	7.7	10,000,000	10,000,000	0	0.00	75,000	0.750	23,300	0.23	9,901,700	99.017	30	6.727%	672,700	6.727%	0.000%
13	3.141%	3.141% Series	6/17/2019	6/15/2029	8.7	50,000,000	50,000,000	0	0.00	312,500	0.625	255,252	0.51	49,432,248	98.864	10	3.275%	1,637,500	3.275%	0.000%
14	7.740%	7.740% Series	8/29/2000	8/29/2030	9.9	20,000,000	20,000,000	0	0.00	150,000	0.750	1,354,914	[3] 6.77	18,495,086	92.475	30	8.433%	1,686,600	8.433%	0.000%
15	7.850%	7.850% Series	9/6/2000	9/1/2030	9.9	10,000,000	10,000,000	0	0.00	75,000	0.750	678,107	[5] 6.78	9,246,893	92.469	29	8.551%	855,100	8.551%	0.000%
16	5.820%	5.820% Series	9/24/2002	9/24/2032	12.0	30,000,000	30,000,000	0	0.00	225,000	0.750	165,382	0.55	29,609,618	98.699	30	5.913%	1,773,900	5.913%	0.000%
17	5.660%	5.660% Series	2/25/2003	2/25/2033	12.4	40,000,000	40,000,000	0	0.00	300,000	0.750	56,663	0.14	39,643,337	99.108	30	5.723%	2,289,200	5.723%	0.000%
18	5.250%	5.250% Series	6/21/2005	6/21/2035	14.7	10,000,000	10,000,000	0	0.00	75,000	0.750	22,974	0.23	9,902,026	99.020	30	5.316%	531,600	5.316%	0.000%
19	4.000%	4.000% Series	10/30/2012	10/31/2042	22.1	50,000,000	50,000,000	0	0.00	300,000	0.600	235,479	0.47	49,464,522	98.929	30	4.062%	2,031,000	4.062%	0.000%
20	4.136%	4.136% Series	12/5/2016	12/5/2046	26.2	40,000,000	40,000,000	0	0.00	300,000	0.750	307,712	0.77	39,392,588	98.481	30	4.226%	1,690,400	4.226%	0.000%
21	3.685%	3.685% Series	9/13/2017	9/13/2047	27.0	75,000,000	75,000,000	0	0.00	562,500	0.750	367,946	0.49	74,069,554	98.759	30	3.754%	2,815,500	3.754%	0.000%
22	4.110%	4.110% Series	9/10/2018	9/10/2048	28.0	50,000,000	50,000,000	0	0.00	125,000	0.250	174,695	0.35	49,700,305	99.401	30	4.145%	2,072,500	4.145%	0.000%
23	3.869%	3.869% Series	6/17/2019	6/15/2049	28.7	90,000,000	90,000,000	0	0.00	675,000	0.750	415,358	0.46	88,909,642	98.788	30	3.938%	3,544,200	3.938%	0.000%
24	3.600%	3.600% Series	3/31/2020	3/15/2050	29.5	150,000,000	150,000,000	(598,500)	0.40	1,125,000	0.750	694,452	0.46	147,582,048	98.388	30	3.689%	5,533,500	3.689%	0.000%
						\$924,700,000	\$924,700,000	-\$598,500		\$6,328,838		\$10,093,190		\$907,679,472			4.597%	\$42,512,408		
WEIGHTED EMBEDDED COST:						\$42,512,408	\$924,700,000	EQUALS =		4.597%										
[1] INCLUDES PREMIUM AND UNAMORTIZED COST ON EARLY REDEMPTION OF 9.8% SERIES BONDS (\$1,044,111 ALLOCATED TO THE 8.31% SERIES, AND \$835,723 ALLOCATED TO THE 8.26% SERIES).																				
[2] INCLUDES \$910,800 PREMIUM AND \$222,664 UNAMORTIZED COSTS ON EARLY REDEMPTION OF 9.125% SERIES BONDS ALLOCATED TO THE 6.60% SERIES.																				
[3] INCLUDES \$992,143 PREMIUM, \$178,966 UNAMORTIZED COSTS ON EARLY REDEMPTION OF 9.75% SERIES BONDS, AND \$148,605 UNAMORTIZED COSTS ON EARLY REDEMPTION OF 15.375% SERIES BONDS ALLOCATED TO THE 7.74% SERIES.																				
[4] INCLUDES \$826,786 PREMIUM, \$149,139 UNAMORTIZED COSTS ON EARLY REDEMPTION OF 9.75% SERIES BONDS, AND \$123,837 UNAMORTIZED COSTS ON EARLY REDEMPTION OF 15.375% SERIES BONDS ALLOCATED TO THE 7.72% SERIES.																				
[5] INCLUDES \$496,071 PREMIUM, \$89,483 UNAMORTIZED COSTS ON EARLY REDEMPTION OF 9.75% SERIES BONDS, AND \$74,302 UNAMORTIZED COSTS ON EARLY REDEMPTION OF 15.375% SERIES BONDS ALLOCATED TO THE 7.85% SERIES.																				
[6] INCLUDES \$150,000 PREMIUM AND \$405,971 UNAMORTIZED COSTS ON EARLY REDEMPTION OF 7.50% SERIES BONDS, \$413,600 PREMIUM AND \$1,116,479 UNAMORTIZED COSTS ON EARLY REDEMPTION OF 7.52% SERIES BONDS AND \$730,000 PREMIUM AND \$136,800 UNAMORTIZED COSTS ON EARLY REDEMPTION OF 7.25% SERIES BONDS ALLOCATED TO 5.62% SERIES.																				
[7] INCLUDES \$10,096,000 COSTS PAID ON INTEREST RATE HEDGE LOSS AND \$298,058 UNAMORTIZED COSTS ON SHELF REGISTRATION, ALLOCATED TO 5.37% SERIES.																				
[8] In November 2009 one investor exercised its right under a one-time put option to redeem \$0.3 million of the \$20 million outstanding. This one-time put option has now expired, and the remaining \$19.7 million remaining principal outstanding is expected to be redeemed at maturity in November 2027.																				