



Northern Natural Gas
P.O. Box 3330
Omaha, NE 68103-0330
402 398-7200

May 5, 2022

Via eFiling

Ms. Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First Street, N.E.
Washington, D.C. 20426

Re: OEP/DPC/CB-1
Northern Natural Gas Company
Docket No. CP22-138-000
§ 375.308(x)(3)

Dear Ms. Bose:

Northern Natural Gas (Northern) hereby submits for filing with the Federal Energy Regulatory Commission (FERC) in the above-referenced docket Northern's response to the data request issued by FERC staff April 5, 2022. FERC's request and Northern's response are below. An Excel file is being submitted directly to staff via email with the formulas necessary to calculate the AFUDC. Northern is filing its response, including spreadsheets in PDF format.

FERC Request 1: In support of its Section 7(c) application to implement construct and operate construct facilities associated with, and to own, and operate six segments of pipeline facilities totaling 9.38 miles, with appurtenances in Minnesota and Wisconsin to expand the capacity of the Northern Market. ("Northern Lights 2023 expansion").

1. In Exhibit K, Northern Natural Gas Company estimates total capitalized Allowance for Funds Used During Construction (AFUDC) to be \$786,261. Please provide the following in Microsoft Excel:

- i. The worksheet computations on a monthly basis to support the \$786,261 of AFUDC. Separately identify the debt/equity components.
- ii. The computation and methodology to support the debt/equity cost rates used to derive the AFUDC rate.

The worksheets and/or files should retain all notes and any formulas supporting the calculation. If the project components as identified on Exhibit K of the Application have

varying construction start and in-service dates, please provide the calculations in separate worksheets so that the AFUDC start and end dates are clear for each component.

Northern's Response:

i. Northern will calculate AFUDC based on actual costs paid. All accruals and retention charges as well as all other non-construction costs paid, such as land and property rights, that are charged to the project will be excluded from the AFUDC base. During construction, the AFUDC base will be equal to the sum of the prior month's project to-date payments, including AFUDC, plus one-half of the current month's payments. See the formula below.

AFUDC base = Prior month project to-date payments + AFUDC + $\frac{1}{2}$ (current month payments)

For the month assets are placed in-service, the AFUDC base is the sum of one-half of the prior month project to-date payments, including AFUDC, plus one-fourth of the current month's payments. See the formula below.

AFUDC base for in service month = $\frac{1}{2}$ (prior month project to-date payments + AFUDC) + $\frac{1}{4}$ (current month payments)

Monthly AFUDC debt and equity accrual amounts are determined by multiplying the monthly debt and equity rates derived using the methodology provided in response to item (ii) times the AFUDC base for the month.

ii. Please see Exhibits 3 and 4 of the attached Excel file for Northern's AFUDC monthly rate calculation for years 2021 and 2022. Northern does not have any short-term debt instruments; therefore, the proration calculation for short-term and long-term debt is not applicable.

As shown on Exhibits 3 and 4, Northern first calculates its annual AFUDC rate for the current year based on its capital structure as of December 31 of the prior year. Northern's capital structure is based on its total proprietary capital reported on page 112 of its FERC Form 2, line 15 less line 14, accumulated other comprehensive income, and the sum of long-term debt also reported on page 112 on lines 17 and 20.

For 2021 and 2022, Northern uses an equity rate of 13.41% for its AFUDC calculation. Northern's Docket No. RP19-1353 rate case settlement approved by the Commission on September 28, 2020, did not stipulate an allowed return on equity. Therefore, beginning with the AFUDC rate for 2021, Northern is using its actual three-year average return on equity as directed in instruction number 3 on Page 218a of the FERC Form 2 for the computation of the AFUDC rates. Northern's debt rate is its weighted average cost of debt per the calculations shown on the attached schedules, which was 4.465% as of December 31, 2020, and 4.147% for December 31, 2021. For future years, Northern will update the implied equity and debt rates accordingly.

Once Northern has determined its annual AFUDC rate, it uses the formula below to determine its monthly AFUDC rate, compounded semi-annually.

Kimberly D. Bose, Secretary

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Monthly AFUDC Rate = $[(1 + \text{annual AFUDC rate}/2)^{2^{(1/12)}}] - 1$

On May 14, 2019, FERC staff filed in Docket No. PA16-2-000 its findings of an audit to evaluate Northern's compliance with accounting regulations of the Uniform System of Accounts (USofA) under 18 CFR Part 201 among other items. The audit tested Northern's calculation of AFUDC debt and equity rates, monthly accruals, frequency of compounding, and accounting for a select sample of capital projects. FERC staff examined inputs to each component of debt and equity, compared them with Form No. 2 data and traced the amounts to the general ledger and source documents. As part of this review, FERC staff recalculated the yield to maturity used to derive the cost rate for long-term debt, traced the equity rate to Northern's last approved rate case, and ensured that Northern considered short-term debt as the first source of financing construction as required by GPI 3(17) and Commission Order 561. There were no audit findings or recommendation for change to Northern's calculation of AFUDC. The audit covered January 1, 2013, to December 31, 2017.

Any questions regarding the filing should be directed to the undersigned at (402) 398-7103.

Respectfully submitted,

/signed/ Michael T. Loeffler

Michael T. Loeffler
Senior Director, Certificates and External Affairs

cc: Parties of record

Exhibit 1

Northern Natural Gas Company
 Northern Lights 2023
 Docket No. CP22-138-000

Project Descriptions	Total Project Estimated Costs	Estimated		Total Estimated AFUDC	Total Estimated Cost
		Estimated Debt AFUDC	Equity AFUDC		
Ventura North E-line Extension	\$ 18,314,963	\$ 47,591	\$ 245,446	\$ 293,037	\$ 18,608,000
Willmar D-line Branch Line Extension	\$ 9,993,917	\$ 27,947	\$ 144,136	\$ 172,083	\$ 10,166,000
Paynesville Branch Line Loop	\$ 3,002,960	\$ 7,802	\$ 40,238	\$ 48,040	\$ 3,051,000
Elk River Branch Line Loop	\$ 8,375,004	\$ 21,761	\$ 112,235	\$ 133,996	\$ 8,509,000
Tomah Branch Line Loop Extension	\$ 933,802	\$ 2,631	\$ 13,567	\$ 16,198	\$ 950,000
Princeton Tie-over Loop Extension	\$ 7,288,093	\$ 19,961	\$ 102,946	\$ 122,907	\$ 7,411,000
Total Pipeline	\$ 47,908,739	\$ 127,693	\$ 658,568	\$ 786,261	\$ 48,695,000
Total Project Cost	\$ 47,908,739	\$ 127,693	\$ 658,568	\$ 786,261	\$ 48,695,000

Exhibit 2

Northern Natural Gas Company
 Northern Lights 2023
 Docket No. CP22-138-000
 AFUDC Calculation

Exhibit K

Description	Total Cost	Right of Way	Other Construction Cost	AFUDC
Ventura North E-line Extension	\$18,608,000	\$440,000	\$17,874,963	\$293,037
Willmar D-line Branch Line Extension	\$10,166,000	\$1,150,000	\$8,843,917	\$172,083
Paynesville Branch Line Loop	\$3,051,000	\$150,000	\$2,852,960	\$48,040
Elk River Branch Line Loop	\$8,509,000	\$350,000	\$8,025,004	\$133,996
Tomah Branch Line Loop Extension	\$950,000	\$75,000	\$858,802	\$16,198
Princeton Tie-over Loop Extension	\$7,411,000	\$950,000	\$6,338,093	\$122,907
Northern Lights 2023 Total	\$48,695,000	\$3,115,000	\$44,793,739	\$786,261

Method: AFUDC Reduced Rate (Compensates for inclusion of accrued AFUDC in base to prevent compounding more frequently than semiannually)
 Monthly AFUDC Rate Formula: $=(1+\text{annual AFUDC rate}/2)^2 \cdot (1/12) - 1$
 Frequency of Compounding: Semiannually

Project	AFUDC Month	Construction Charges Paid	Land And Land Rights Adjustment	Accrual Adjustment	Foot Note	AFUDC Base Additions	Beginning AFUDC Base	1/2 Month	Half Current Month	Base Addition	AFUDC Compound Amount	AFUDC Base	Monthly AFUDC Debt Rate	Monthly AFUDC Equity Rate	AFUDC Debt	AFUDC Equity	Total AFUDC	Ending AFUDC Base	
								Beginning Base Adjustment for In Service	AFUDC Base Additions	Adjustment for In Service									
Northern Lights 2023	Dec-21	\$ 445,832	\$ -	\$ (372,701)		\$ 73,131	\$ -	\$ -	\$ 36,566	\$ -	\$ -	\$ 36,566	0.126478%	0.714396%	\$ 46.25	\$ 261.22	\$ 307.47	\$ 73,131	
Northern Lights 2023	Jan-22	\$ 312,491	\$ -	\$ 372,701		\$ 685,192	\$ 73,131	\$ -	\$ 342,596	\$ -	\$ 307	\$ 416,035	0.130531%	0.673178%	\$ 543.05	\$ 2,800.65	\$ 3,343.70	\$ 758,631	
Northern Lights 2023	Feb-22	\$ 202,770	\$ -	\$ -		\$ 202,770	\$ 758,631	\$ -	\$ 101,385	\$ -	\$ 3,344	\$ 863,359	0.130531%	0.673178%	\$ 1,126.95	\$ 5,811.94	\$ 6,938.89	\$ 964,744	
Northern Lights 2023	Mar-22	\$ 223,481	\$ (765)	\$ -		\$ 222,716	\$ 964,744	\$ -	\$ 111,358	\$ -	\$ 6,939	\$ 1,083,041	0.130531%	0.673178%	\$ 1,413.70	\$ 7,290.79	\$ 8,704.49	\$ 1,194,399	
Northern Lights 2023	Apr-22	\$ 907,003	\$ (885,000)	\$ -		\$ 22,003	\$ 1,194,399	\$ -	\$ 11,002	\$ -	\$ 8,704	\$ 1,214,105	0.130531%	0.673178%	\$ 1,585	\$ 8,173	\$ 9,758	\$ 1,225,106	
Northern Lights 2023	May-22	\$ 27,573	\$ -	\$ -		\$ 27,573	\$ 1,225,106	\$ -	\$ 13,787	\$ -	\$ 9,758	\$ 1,248,650	0.130531%	0.673178%	\$ 1,630	\$ 8,406	\$ 10,036	\$ 1,262,437	
Northern Lights 2023	Jun-22	\$ 38,556	\$ -	\$ -		\$ 38,556	\$ 1,262,437	\$ -	\$ 19,278	\$ -	\$ 10,036	\$ 1,291,750	0.130531%	0.673178%	\$ 1,686	\$ 8,696	\$ 10,382	\$ 1,311,028	
Northern Lights 2023	Jul-22	\$ 36,266	\$ -	\$ -		\$ 36,266	\$ 1,311,028	\$ -	\$ 18,133	\$ -	\$ 10,382	\$ 1,339,543	0.130531%	0.673178%	\$ 1,749	\$ 9,018	\$ 10,766	\$ 1,357,676	
Northern Lights 2023	Aug-22	\$ 49,701	\$ -	\$ -		\$ 49,701	\$ 1,357,676	\$ -	\$ 24,851	\$ -	\$ 10,766	\$ 1,393,293	0.130531%	0.673178%	\$ 1,819	\$ 9,379	\$ 11,198	\$ 1,418,143	
Northern Lights 2023	Sep-22	\$ 76,615	\$ -	\$ -		\$ 76,615	\$ 1,418,143	\$ -	\$ 38,308	\$ -	\$ 11,198	\$ 1,467,649	0.130531%	0.673178%	\$ 1,916	\$ 9,880	\$ 11,796	\$ 1,505,956	
Northern Lights 2023	Oct-22	\$ 92,120	\$ -	\$ -		\$ 92,120	\$ 1,505,956	\$ -	\$ 46,060	\$ -	\$ 11,796	\$ 1,563,812	0.130531%	0.673178%	\$ 2,041	\$ 10,527	\$ 12,568	\$ 1,609,872	
Northern Lights 2023	Nov-22	\$ 204,614	\$ (45,000)	\$ -		\$ 159,614	\$ 1,609,872	\$ -	\$ 79,807	\$ -	\$ 12,568	\$ 1,702,247	0.130531%	0.673178%	\$ 2,222	\$ 11,459	\$ 13,681	\$ 1,782,054	
Northern Lights 2023	Dec-22	\$ 559,577	\$ (449,235)	\$ -		\$ 110,342	\$ 1,782,054	\$ -	\$ 55,171	\$ -	\$ 13,681	\$ 1,850,907	0.130531%	0.673178%	\$ 2,416	\$ 12,460	\$ 14,876	\$ 1,906,078	
Northern Lights 2023	Jan-23	\$ 649,181	\$ (355,000)	\$ -		\$ 294,181	\$ 1,906,078	\$ -	\$ 147,091	\$ -	\$ 14,876	\$ 2,068,044	0.130531%	0.673178%	\$ 2,699	\$ 13,922	\$ 16,621	\$ 2,215,134	
Northern Lights 2023	Feb-23	\$ 660,190	\$ (240,000)	\$ -		\$ 420,190	\$ 2,215,134	\$ -	\$ 210,095	\$ -	\$ 16,621	\$ 2,441,851	0.130531%	0.673178%	\$ 3,187	\$ 16,438	\$ 19,625	\$ 2,651,946	
Northern Lights 2023	Mar-23	\$ 1,248,509	\$ (200,000)	\$ -		\$ 1,048,509	\$ 2,651,946	\$ -	\$ 524,255	\$ -	\$ 19,625	\$ 3,195,825	0.130531%	0.673178%	\$ 4,172	\$ 21,514	\$ 25,685	\$ 3,720,080	
Northern Lights 2023	Apr-23	\$ 1,431,609	\$ -	\$ -		\$ 1,431,609	\$ 3,720,080	\$ -	\$ 715,805	\$ -	\$ 25,685	\$ 4,461,570	0.130531%	0.673178%	\$ 5,824	\$ 30,034	\$ 35,858	\$ 5,177,374	
Northern Lights 2023	May-23	\$ 1,943,319	\$ -	\$ -		\$ 1,943,319	\$ 5,177,374	\$ -	\$ 971,660	\$ -	\$ 35,858	\$ 6,184,892	0.130531%	0.673178%	\$ 8,073	\$ 41,635	\$ 49,709	\$ 7,156,551	
Northern Lights 2023	Jun-23	\$ 2,202,377	\$ (940,000)	\$ -		\$ 1,262,377	\$ 7,156,551	\$ -	\$ 631,189	\$ -	\$ 49,709	\$ 7,837,448	0.130531%	0.673178%	\$ 10,230	\$ 52,760	\$ 62,990	\$ 8,468,637	
Northern Lights 2023	Jul-23	\$ 3,600,792	\$ -	\$ -		\$ 3,600,792	\$ 8,468,637	\$ -	\$ 1,800,396	\$ -	\$ 62,990	\$ 10,332,023	0.130531%	0.673178%	\$ 13,486	\$ 69,553	\$ 83,039	\$ 12,132,419	
Northern Lights 2023	Aug-23	\$ 4,290,791	\$ -	\$ -		\$ 4,290,791	\$ 12,132,419	\$ -	\$ 2,145,396	\$ -	\$ 83,039	\$ 14,360,853	0.130531%	0.673178%	\$ 18,745	\$ 96,674	\$ 115,419	\$ 16,506,249	
Northern Lights 2023	Sep-23	\$ 4,744,154	\$ -	\$ -		\$ 4,744,154	\$ 16,506,249	\$ -	\$ 2,372,077	\$ -	\$ 115,419	\$ 18,993,745	0.130531%	0.673178%	\$ 24,793	\$ 127,862	\$ 152,654	\$ 21,365,822	
Northern Lights 2023	Oct-23	\$ 6,578,657	\$ -	\$ -	1/	\$ 6,578,657	\$ 21,365,822	\$ (10,682,911)	\$ 3,289,329	\$ (1,644,664)	\$ 152,654	\$ 12,480,230	0.130531%	0.673178%	\$ 16,291	\$ 84,014	\$ 100,305	\$ 28,097,134	
Northern Lights 2023	Nov-23	\$ 7,725,677	\$ -	\$ -		\$ 7,725,677	\$ 28,097,134	\$ (28,097,134)	\$ 3,862,839	\$ (3,862,839)	\$ -	\$ -	0.130531%	0.673178%	\$ -	\$ -	\$ -	\$ -	
Northern Lights 2023	Dec-23	\$ 6,233,119	\$ -	\$ -		\$ 6,233,119	\$ -	\$ -	\$ 3,116,560	\$ (3,116,560)	\$ -	\$ -	0.130531%	0.673178%	\$ -	\$ -	\$ -	\$ -	
Northern Lights 2023	Jan-24	\$ 2,211,884	\$ -	\$ -		\$ 2,211,884	\$ -	\$ -	\$ 1,105,942	\$ (1,105,942)	\$ -	\$ -	0.130531%	0.673178%	\$ -	\$ -	\$ -	\$ -	
Northern Lights 2023	Feb-24	\$ 1,211,882	\$ -	\$ -		\$ 1,211,882	\$ -	\$ -	\$ 605,941	\$ (605,941)	\$ -	\$ -	0.130531%	0.673178%	\$ -	\$ -	\$ -	\$ -	
													Total AFUDC		\$ 127,693	\$ 658,568	\$ 786,261		

1/ The Project estimated in service date is 10/1/23. In Service month receives 1/2 of AFUDC.

NORTHERN NATURAL GAS COMPANY

2021 AFUDC RATE CALCULATION

Line No.	Capitalization Items (a)	Capitalization at 12/31/2017 (b)	Capitalization at 12/31/2018 (d)	Capitalization at 12/31/2019 (e)	Capitalization at 12/31/2020 (e)	Capitalization Percent (e)	Rate (f)	2021 ANNUAL (g)	2021 SEMIANNUAL COMPOUNDED ANNUAL AFUDC RATE (h)	2021 SEMIANNUAL COMPOUNDED MONTHLY AFUDC RATE (i)
1	DEBT CAPITAL	\$ 800,000,000	\$ 1,050,000,000	\$ 1,250,000,000	\$ 1,250,000,000	34.713%	4.465%	1.5500014%	15.04%	1.5899%
2	PREFERRED STOCK CAPITAL	0				0.000%				0.126478%
3	COMMON STOCK EQUITY	\$ 1,580,037,816	\$ 1,776,160,549	\$ 2,050,018,087	\$ 2,350,971,198	65.287%	13.410% (1)	8.7550058%	84.96%	8.9806%
4	TOTAL CAPITALIZATION	\$ 2,380,037,816	\$ 2,826,160,549	\$ 3,300,018,087	\$ 3,600,971,198	100.000%		10.3050072%	100.00%	10.5705%

Semiannual Compounded AFUDC Rate Formula
Monthly AFUDC Rate = [(1+annual AFUDC rate/2)^2*(1/12)]-1

Average

Line No.	Title (a)	Date of Issuance (b)	Maturity (c)	Current Interest Rate (d)	Principal Amount of Issue (e)	Coupn Payments per Year	Gross Proceeds (f)	Underwriter's Commis. Amount (g)	Issuance Expense			Issuance Premium Amount (k)	% Gross Proceeds (l)	Net Proceeds Amount (m)	Per Unit (n)	Life of Issue (Years) (o)	Cost of Money (p)	Debt Capital Outstanding (q)	Annual Cost (rr)	Wgtd Avg Cost (s)		
									% Gross Proceeds (h)	Amount (i)	% Gross Proceeds (j)											
1	5.800 % Due	2/15/2007	2/15/2037	5.800%	99.254	150,000,000	2	100.000	149,893,500	422,850	0.282%	590,076	0.394%	-	0.000%	148,880,574	99.254%	30.00	5.85%	150,000,000	8,779,627	
2	4.300 % Due	7/17/2018	1/15/2049	4.300%	98.944	450,000,000	2	100.000	449,923,500	3,600,000	0.800%	1,075,809	0.239%	-	0.000%	445,247,691	98.944%	30.50	4.36%	450,000,000	19,633,248	
3	4.250 % Due	4/20/2011	6/1/2021	4.250%	99.152	200,000,000	2	100.000	200,377,363	1,000,000	0.499%	1,072,505	0.535%	-	0.000%	198,304,858	99.152%	10.11	4.35%	200,000,000	8,708,003	
4	4.100 % Due	8/27/2012	9/15/2042	4.100%	98.945	250,000,000	2	100.000	249,565,000	1,625,000	0.651%	577,472	0.231%	-	0.000%	247,362,528	98.945%	30.05	4.16%	250,000,000	10,404,325	
5	4.300 % Due	6/17/2019	1/15/2049	4.300%	102.626	200,000,000	2	100.000	200,000,000	1,500,000	0.750%	763,675	0.382%	(7,516,000)	-3.758%	205,252,325	102.626%	29.58	4.14%	200,000,000	8,289,901	
6	Projected Debt Capital at NORTHERN NATURAL GAS COMPANY					1,250,000,000			1,249,759,363	8,147,850		4,079,537		(7,516,000)		1,245,047,876				1,250,000,000	55,815,104 *	4.465%
7	Common Stock Equity		12/31/2017	12/31/2018	12/31/2019	12/31/2020																
	Total Shareholder's Equity per FERC Balance Sheet		1,580,037,816	1,776,160,549	2,050,018,087	2,350,971,199																
	Equals: Common Stock Equity		1,580,037,816	1,776,160,549	2,050,018,087	2,350,971,199																

(1) Northern's RP19-1353 rate case settlement approved by the Commission did not stipulate an allowed return on equity. Therefore, beginning with the AFUDC rate for 2021, Northern began using its actual three-year average return on equity.

NORTHERN NATURAL GAS COMPANY

2022 AFUDC RATE CALCULATION

Line No.	Capitalization Items (a)	Capitalization at 12/31/2018 (b)	Capitalization at 12/31/2019 (d)	Capitalization at 12/31/2020 (e)	Capitalization at 12/31/2021 (e)	Capitalization Percent (e)	Rate (f)	2022 ANNUAL (g)	2022 SEMIANNUAL COMPOUNDED ANNUAL AFUDC RATE (h)	2022 SEMIANNUAL COMPOUNDED MONTHLY AFUDC RATE (i)
1	DEBT CAPITAL	\$ 1,050,000,000	\$ 1,250,000,000	\$ 1,250,000,000	\$ 1,600,000,000	38.537%	4.147%	1.60%	16.24%	1.6375%
2	PREFERRED STOCK CAPITAL	0				0.000%				
3	COMMON STOCK EQUITY	\$ 1,776,160,549	\$ 2,050,018,087	\$ 2,350,971,198	\$ 2,551,860,644	61.463%	13.410% (1)	8.24%	83.76%	8.4450%
4	TOTAL CAPITALIZATION	\$ 2,826,160,549	\$ 3,300,018,087	\$ 3,600,971,198	\$ 4,151,860,644	100.000%		9.84%	100.00%	10.0825%

Semiannual Compounded AFUDC Rate Formula
Monthly AFUDC Rate = $[(1 + \text{annual AFUDC rate}/2)^2 \cdot (1/12)] - 1$

Average

Line No.	Title (a)	Date of Issuance (b)	Maturity (c)	Current Interest Rate (d)	Principal Amount of Issue (e)	Coupn Payments per Year	Gross Proceeds (f)	Underwriter's Commis. Amount (g)	Issuance Expense			Issuance Premium Amount (k)	% Gross Proceeds (l)	Net Proceeds Amount (m)	Per Unit (n)	Life of Issue (Years) (o)	Cost of Money (p)	Debt Capital Outstanding (q)	Annual Cost (rr)	Wghtd Avg Cost (s)		
									% Gross Proceeds (h)	Amount (i)	% Gross Proceeds (j)											
									Amount (k)	Proceeds (l)	Amount (m)											
1	5.800 % Due	2/12/2007	2/15/2037	5.800%	99,254	150,000,000	2	100.000	149,893,500	422,850	0.282%	590,076	0.394%	-	0.000%	148,880,574	99.254%	30.00	5.85%	150,000,000	8,779,545	
2	4.100 % Due	8/27/2012	9/15/2042	4.100%	98,945	250,000,000	2	100.000	249,565,000	1,625,000	0.651%	577,472	0.231%	-	0.000%	247,362,528	98.945%	30.05	4.16%	250,000,000	10,404,325	
3	4.300 % Due	7/17/2018	1/15/2049	4.300%	98,944	450,000,000	2	100.000	449,923,500	3,600,000	0.800%	1,075,809	0.239%	-	0.000%	445,247,691	98.944%	30.50	4.36%	450,000,000	19,633,248	
4	4.300 % Due	6/17/2019	1/15/2049	4.300%	102,626	200,000,000	2	100.000	200,000,000	1,500,000	0.750%	763,675	0.382%	(7,516,000)	-3.758%	205,252,325	102.626%	29.58	4.14%	200,000,000	8,289,901	
5	3.400 % Due	4/21/2021	10/16/2051	3.400%	98,144	550,000,000	2	100.000	550,000,000	4,125,000	0.750%	1,220,497	0.222%	4,862,000	0.884%	539,792,503	98.144%	30.50	3.50%	550,000,000	19,247,144	
6	Projected Debt Capital at NORTHERN NATURAL GAS COMPANY					1,600,000,000			1,599,382,000	11,272,850		4,227,529		(2,654,000)		1,586,535,621				1,600,000,000	66,354,163 *	4.147%

Line No.	Common Stock Equity	12/31/2018	12/31/2019	12/31/2020	12/31/2021
7	Total Shareholder's Equity per FERC Balance Sheet Equals: Common Stock Equity	1,776,160,549	2,050,018,087	2,350,971,198	2,551,860,644

(1) Allowed equity rate in RP03-398 and RP04-155 rate case settlement