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**FILED ELECTRONICALLY AND OVERNIGHT DELIVERY**

March 27, 2019

Debra Howland  
Executive Director and Secretary  
New Hampshire Public Utilities Commission  
21 S. Fruit St., Suite 10  
Concord, New Hampshire 03301-2429

Re: DG 16-855, Petition for Approval of Sixth Amendment to Special Contract-  
REDACTED Updated Schedule 1-9

Dear Director Howland:

Pursuant to Order No. 26,107 issued by the Commission on February 28, 2018 in the above-captioned docket, enclosed please find 1 public copy and 7 confidential copies of a document labeled "Updated Schedule 1-9

Pursuant to N.H. Admin. R. Puc 201.04 (C) (1) and (2), each page of the enclosed document has been marked confidential in the upper right hand corner, and confidential information that has been redacted from the public versions of the documents has been designated in the enclosed documents by shading.

Please contact me if there any questions about this filing. Thank you for your assistance and cooperation in this matter.

Respectfully submitted,

***George H. Simmons Jr.***

George H. Simmons Jr.

George H. Simmons Jr.  
Manager - Regulatory Services

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**Foss Mfg. Special Contract**

Northern Utilities, Inc. Marginal Cost Estimate template

**Redacted**

Updated Schedule 1-9  
Page 1 of 2

Escalating Marginal Costs using GDPLEV from Bureau of Economic Analysis data:

- 1) Go to -> <http://www.bea.gov/national/index.htm> web page;
- 2) Click on the link for *Current-Dollar and "Real" Gross Domestic Product*;
- 3) Update annual "GDP in billions of current dollars" and "GDP in billions of chained 2012 dollars" data in the table below;
- 4) Forecast years GDP estimates use EIA Energy Outlook projections (Table 20 Macroeconomics Indicators);
- Go to -> <http://www.eia.doe.gov/oi/af/aeo/index.html> web page;
- 5) Update prior to start of each contract year.

**Adjustment escalators to Marginal Costs**

GDP in billions of current dollars	GDP in billions of chained 2012 dollars		GDP Chain-type Price Index (2012=1.000)	Marginal Cost Study Escalation Factor Calculation
1998	9,062.8	12,038.3	0.7528	
1999	9,630.7	12,610.5	0.7637	
2000	10,252.3	13,131.0	0.7808	
2001	10,581.8	13,262.1	0.7979	
2002	10,936.4	13,493.1	0.8105	
2003	11,458.2	13,879.1	0.8256	
2004	12,213.7	14,406.4	0.8478	
2005	13,036.6	14,912.5	0.8742	
2006	13,814.6	15,338.3	0.9007	
2007	14,451.9	15,626.0	0.9249	
2008	14,712.8	15,604.7	0.9428	
2009	14,448.9	15,208.8	0.9500	
2010	14,992.1	15,598.8	0.9611	
2011	15,542.6	15,840.7	0.9812	
2012	16,197.0	16,197.0	1.0000	
2013	16,784.9	16,495.4	1.0176	
2014	17,521.7	16,899.8	1.0368	
2015	18,219.3	17,386.7	1.0479	
2016	18,707.2	17,659.2	1.0593	
2017	19,485.4	18,050.7	1.0795	
2018	20,500.6	18,571.3	1.1039	1.1039
2019			1.1273	
2020			1.1568	1.1322
Calculation of Escalation Factor ->				1.0257

**ANNUALIZED MARGINAL COST ESTIMATE**

A	B	C	D	E	F	G	H
			DG 17-070 Compliance Filing MCS (Tables 9 & 11)	DG 17-070 Compliance Filing MCS Adj. (Table 14)	Feb 2020 Est		Notes
1 Escalation Factor					1.0257		
2 Marginal Cost Data			Begin Confidential				
3 Customer Charge			[Redacted]				E3 x F1
4 Pressure Support						E4 x F1	
5 Main Reinforcement (per Dth)						E5 x F1	
6 Main Extension (per Dth)						E6 x F1	
7 Adjusted MCS (Table 14)							
8							
9 Customer Data							
10 Annual Usage						Dth	3-2018 to 2-2019 Annual Usage
11 Design Day Usage						Dth	Customer MDTQ
12							Avg Dth per day
13 Marginal Revenue Requirement							
14 Customer Charge							F3 x 12
15 Pressure Support							F4 x F11
16 Main Reinforcement							F5 x F11
17 Main Extension							F6 x F11
18 Total							Sum(F14..F17)
19							
20 Marginal Cost Floor - All Components							
21 Revenue Requirement							F18
22 Customer Charge							F3 x 12
23 Remaining Revenue							F21 - F22
24 Volumetric Charge							F23 / F10
)End Confidential							

**Note:**

All marginal costs adjusted for revenue constraints from Table 14 in Compliance Filing MCS  
 Customer Charge from Table - 12, in Compliance Filing MCS  
 Main Reinforcement Cost from Table - 9 in Compliance Filing MCS  
 Main Extension Cost from Table - 9 in Compliance Filing MCS  
 2018 thru 2020 GDP Chain-type Price Index from EIA Annual Energy Outlook 2019

Go to -> [http://data.bls.gov/PDO/servlet/SurveyOutputServlet?data\\_tool=latest\\_numbers&series\\_id=CUUR0000SA0&output\\_view=pct\\_1mth](http://data.bls.gov/PDO/servlet/SurveyOutputServlet?data_tool=latest_numbers&series_id=CUUR0000SA0&output_view=pct_1mth)  
 Filter formatting options - 12 month, February to February, html format, comma delimited

CPI Table Paste Area

Year	Feb
2000	169.800
2001	175.800
2002	177.800
2003	183.100
2004	186.200
2005	191.800
2006	198.700
2007	203.499
2008	211.693
2009	212.193
2010	216.741
2011	221.309
2012	227.663
2013	232.166
2014	234.781
2015	234.722
2016	237.111
2017	243.603
2018	248.991
2019	252.776

**Consumer Price Index - All Urban Consumers**

12-Month Percent Change  
 Series Id: CUUR0000SA0  
 Not Seasonally Adjusted  
 Area: U.S. city average  
 Item: All items  
 Base Period: 1982-84=100

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Inflation Factor Template			Annual Special Contract Rate Adjustment Template		
CPI-U Year	CPI-U, NSA, 12 months, Feb. - Feb.	Inflation Factor	March 1 Contract Rate Year	Monthly Customer Charge	Notes
[Redacted Content]					

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Note: Updated 2020 contract rates will be determined when February 2020 CPI-U data is available, approximately the end of March 2020.

Pursuant to the contract: In no event shall fluctuations in the CPI-U reduce the Special Transportation Rates or Charges below the then current Special Transportation Rates and Charges.

**2019 ANNUALIZED MARGINAL REVENUE ESTIMATE** Begin Confidential(

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