

National Gypsum Special Contract

Northern Utilities, Inc. Marginal Cost Estimate Template

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

- 1) Go to -> <http://www.bea.gov/national/index.htm>
- 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 9a Macroeconomics Indicators);
Go to -> <https://www.eia.doe.gov/outlooks/steo/data/browser/#/?v=5>
- 5) Update prior to start of each contract year.

Adjustment Escalators to Marginal Costs

Year	GDP in billions of current dollars	GDP in billions of chained 2017 dollars	GDP Chain-type Price Index (2017=1.000)	Marginal Cost Study Escalation Factor Calculation
2017	19,612.1	19,612.1	1.0000	
2018	20,656.5	20,193.9	1.0229	
2019	21,521.4	20,692.1	1.0401	
2020	21,323.0	20,234.1	1.0538	1.0538
2021	23,594.0	21,407.7	1.1021	
2022	25,744.1	21,822.0	1.1797	
2023	27,360.9	22,376.9	1.2227	
2024 (est)	28,695.4	22,938.0	1.2510	1.2369
Calculation of Escalation Factor ->				1.1737

ANNUALIZED MARGINAL COST ESTIMATE

A	B	C	D	E	F
Line No.	Description	DG 21-104 Atrium MCS Revised RAJT- 10 Page 2	Estimated Inflation Adjustment Dec. 1, 2024		Notes
1	Escalation Factor		1.1737		
2	Marginal Cost Data				
3	Customer Charge	\$741.49	\$870.29		C3 x D1
4	Pressure Support	\$0.00	\$0.00		C4 x D1
5	Main Reinforcement (per Dth)	\$150.57	\$176.72		C5 x D1
6	Main Extension (per Dth)	\$117.45	\$137.85		C6 x D1
7	O&M (per Dth)	\$28.28	\$33.19		C7 x D1
8					
9	Customer Data				
10	Annual Usage (Therms)				4/23-3/24 Usage
11	Design Day Usage (Dth)				Customer MDTQ
12					
13	Marginal Revenue Requirement				
14	Customer Charge				C3 x 12
15	Pressure Support				C4 x F11
16	Main Reinforcement				C5 x F11
17	Main Extension				C6 x F11
18	O&M				C7 x F11
19	Total				Sum(C14:C18)
20					
21	Marginal Cost Floor - All Components				
22	Revenue Requirement				C19
23	Customer Charge				C14
24	Remaining Revenue				C22 - C23
25	Volumetric Charge				C24

Note:

Customer Charge from Schedule Revised RAJT-10, Page 2, Line 53
Main Reinforcement Cost from Schedule Revised RAJT-10, Page 2, Line 31
Main Extension Cost from Schedule Revised RAJT-10, Page 2, Line 32
O&M Cost from Schedule Revised RAJT-10, Page 2, Line 35
2019 thru 2023 GDP Chain-type Price Index from EIA Annual Energy Outlook
2024 GDP Price Index from EIA Short-Term Energy Outlook

Northern Utilities, Inc.

National Gypsum Special Contract - Marginal Revenue Estimate Template

A	B	C	D
Line No.	Description	Amount	Notes
1	Current Rates (December 1, 2023):		
2	Month Customer Charge		
3	Usage Charge per Therm		
4			
5	November 2023 CPI	307.051	
6	Projected November 2024 CPI	317.491	Line 5 x (1 + Line 8)
7			
8	Forecasted December 1, 2024 CPI Increase (1)	3.4%	
9			
10	Forecasted Rates (December 1, 2024):		
11	Month Customer Charge		Line 1 x (1 + Line 8)
12	Usage Charge per Therm		Line 2 x (1 + Line 8)
13			
14	Annual Usage (Therms)		4/23 - 3/24 Usage
15			
16	Annual Customer Charge Revenue		Line 11 x 12
17	Annual Usage Charge Revenue		Line 12 x Line 14
18	Total Revenues at Forecasted December 1, 2024 Rates		Line 16 + Line 17
19			
20	Estimated Marginal Revenue Requirement		Page 1, Line 19

Note:

(1) Forecasted CPI increase from Investing.com

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1	Escalation Factor		1.1737		
2	Marginal Cost Data				
3	Customer Charge	\$711.04	\$834.55		C3 x D1
4	Pressure Support	\$0.00	\$0.00		C4 x D1
5	Main Reinforcement (per Dth)	\$140.69	\$165.13		C5 x D1
6	Main Extension (per Dth)	\$0.00	\$0.00		C6 x D1
7	O&M (per Dth)	\$28.28	\$33.19		C7 x D1
8					
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Note:

Customer Charge from Schedule Revised RAJT-10, Page 2, Line 53 (Updated to reflect the settled weighted average cost of capital)
Main Reinforcement Cost from Schedule Revised RAJT-10, Page 2, Line 31 (Updated to reflect the settled weighted average cost of capital)
Main Extension Cost from Schedule Revised RAJT-10, Page 2, Line 32 (Excluded from the analysis)
O&M Cost from Schedule Revised RAJT-10, Page 2, Line 35
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2024 GDP Price Index from EIA Short-Term Energy Outlook

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