Northern States Power Company
State of South Dakota Electric Jurisdiction
Test Year Ending December 31, 2024
Fuel Clause Rider - Fuel Adjustment Factor Calculation

Docket No. EL25-___
Exhibit___(NNP-1), Schedule 6
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		Residential	C&I Non-Dmd	C&I Demand			Outdoor Lighting	RETAIL
	SERVICE CATEGORY							
	STEP 1: CLASS RATIOS							
1.	Hourly Marginal Energy Costs x Hourly Loads*	$25,964,488	$2,577,294	$39,348,798			$271,734	$68,162,314
2.	MWh Energy at Generator	892,834	90,414	1,403,252			11,485	2,397,986
3.	Load-Weighted Marginal Energy Cost /MWh =(1)/(2)	$29.081	$28.505	$28.041			$23.660	$28.425
4.	**Class Ratio (Class Unit Cost / Retail Unit Cost)**	**1.0231**	**1.0028**	**0.9865**			**0.8324**	**1.0000**
	STEP 2: C&I DEMAND TOD RATIOS							
				Non-TOD	On-Peak	Off-Peak		
5.	Ratio of On-Peak to Off-Peak System Weighted Marginal Energy Costs				1.4454			
6.	C&I Demand Class Time-of-Day Percentages from 8760 loads				0.4071	0.5929		
7.	C&I Demand TOD On-Peak Ratio = 1 / (0.4071 + (0.5929 / 1.445)) **				**1.2235**			
8.	C&I Demand TOD Off-Peak Ratio = 1 / ((1.445 x 0.4071) + 0.5929)) **					**0.8465**		
9.	C&I Demand Non-TOD On-Peak Weighting			0.4243				
10.	C&I Demand Non-TOD Off-Peak Weighting			0.5757				
11.	C&I Demand Non-TOD Ratio = (0.4243 x 1.2235) + (0.5757 x 0.8465)			**1.0065**				
	STEP 3: FUEL ADJUSTMENT FACTOR							
12.	FAF = Step 1, or for C&I Demand, Step 1 x Step 2	**1.0231**	**1.0028**	**0.9929**	**1.2070**	**0.8351**	**0.8324**	
		(4)	(4)	(4) x (11)	(4) x (7)	(4) x (8)	(4)	

* E8760 Allocator = Sum of Hourly System Marginal Costs times Hourly Class Loads

** Based on C&I Demand Weighted Average = (40.71% class on-peak x on-peak charge) + (59.29% class off-peak x off-peak charge)