

# Memorandum

To: Commissioners Fedorchak, Christmann, and Haugen-Hoffart

From: Chris Hanson  
*CH*

Date: July 31, 2024

Re: Northern States Power Company (NSP), 2023 Electric, Annual Report  
Case No. PU-24-179

In Case No. PU-20-441, the Commission authorized a NSP Electric return on equity (ROE) of 9.50% and required a 100% refund of all weather-normalized earnings in excess of 9.75%. Staff reviewed NSP's North Dakota electric annual report for 2023. NSP reports Operating Income (OI) of \$52.013 million on an Average Rate Base of \$727 million, resulting in an ROE of approximately 9.65% for 2023. with a weather-normalized ROE of 9.40%, which represents an under-earning of \$386,000.

Excluding storm events and spanning all of 2023, the system average interruption frequency index (SAIFI, or the average number of interruptions per customer) was 0.57 interruptions per customer, the system average interruption duration index (SAIDI, or the average outage duration per customer) was 56.59 minutes per customer, and the customer average interruption duration index (CAIDI, or the average restoration time) was 99.60 minutes.

NSP had one major event day (MED) recorded on 8/3/23 primarily due to interruptions in the Fargo, ND area related to a connector failure.

Given the under-earnings and the recent rate case filing allowing the Commission to review NSP's rates, Staff recommends the Commission close the case.

Attachment 1 – Return Calculation

Attachment 2 – Return on Equity Chart

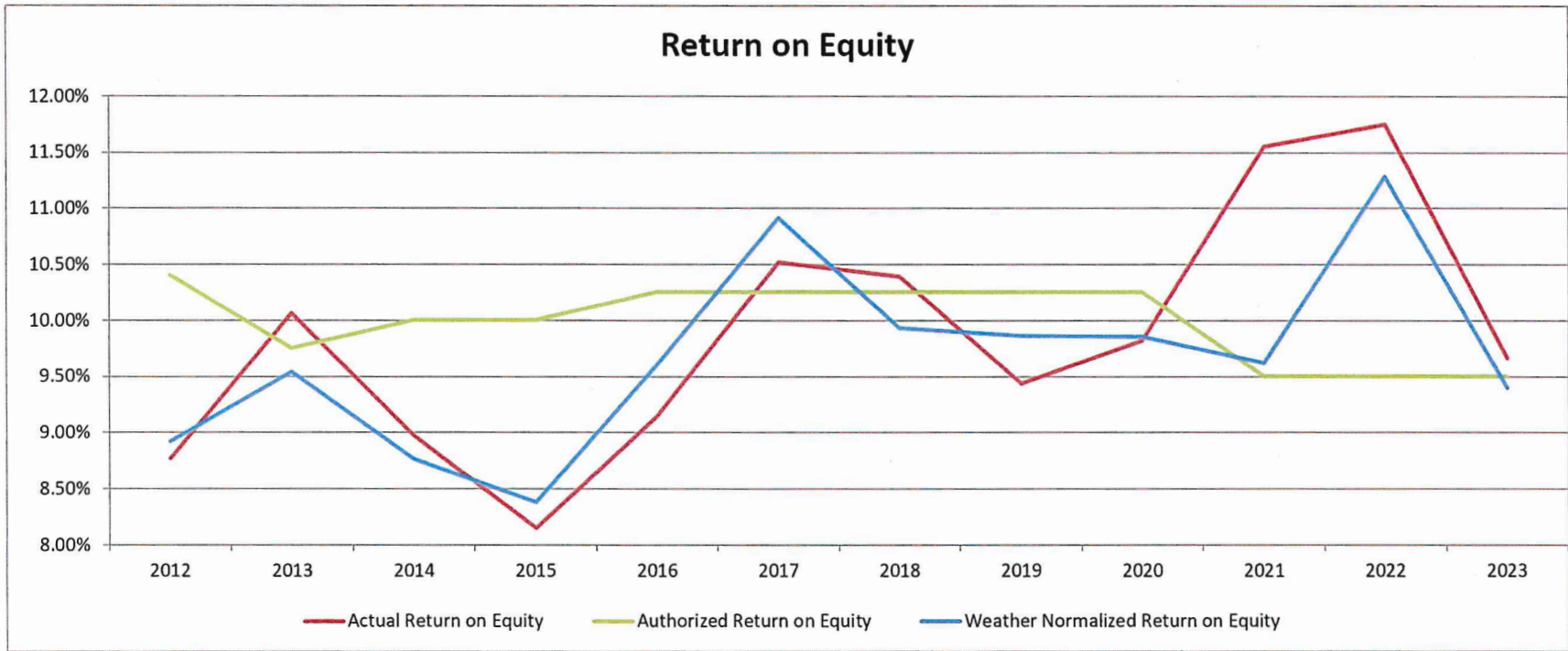
Attachment 3 – Net Operating Income

Attachment 4 – Reliability Indices

c: Alex Nisbett, NSP

Northern States Power Company  
Electric Utility - North Dakota  
Return on Equity & Revenue Deficiency Calculation  
(Dollars in Thousands)

|   | 2012         | 2013          | 2014         | 2015         | 2016         | 2017          | 2018          | 2019         | 2020         | 2021          | 2022          | 2023         |
|---|--------------|---------------|--------------|--------------|--------------|---------------|---------------|--------------|--------------|---------------|---------------|--------------|
| <b>Return Deficiency (Excess)</b>                           |              |               |              |              |              |               |               |              |              |               |               |              |
| Rate Base   | \$ 338,666   | \$ 388,195    | \$ 453,401   | \$ 514,809   | \$ 540,927   | \$ 539,153    | \$ 536,767    | \$ 588,620   | \$ 613,205   | \$ 636,340    | \$ 697,757    | \$ 727,204   |
| Rate of Return Allowed                                      | 8.10%        | 7.42%         | 7.52%        | 7.52%        | 7.61%        | 7.59%         | 7.56%         | 7.54%        | 7.45%        | 7.10%         | 7.12%         | 7.19%        |
| Return Allowed (Line 1 x Line 2)                            | \$ 27,427    | \$ 28,818     | \$ 34,100    | \$ 38,734    | \$ 41,161    | \$ 40,901     | \$ 40,554     | \$ 44,359    | \$ 45,663    | \$ 45,161     | \$ 49,658     | \$ 52,305    |
| Return Earned (non-weather normalized)                      | 24,536       | 29,471        | 31,670       | 33,713       | 38,025       | 41,670        | 40,942        | 41,771       | 44,225       | 51,213        | 56,995        | 52,013       |
| Return Deficiency (Excess)                                  | \$ 2,891     | \$ (653)      | \$ 2,430     | \$ 5,021     | \$ 3,136     | \$ (769)      | \$ (388)      | \$ 2,587     | \$ 1,438     | \$ (6,052)    | \$ (7,336)    | \$ 292       |
| Tax Factor  | 1.622        | 1.612         | 1.612        | 1.608        | 1.608        | 1.608         | 1.323         | 1.323        | 1.323        | 1.323         | 1.323         | 1.323        |
| <b>Revenue Deficiency (Excess) - non-weather normalized</b> | \$ 4,689     | \$ (1,052)    | \$ 3,916     | \$ 8,073     | \$ 5,041     | \$ (1,237)    | \$ (513)      | \$ 3,423     | \$ 1,902     | \$ (8,006)    | \$ (9,705)    | \$ 386       |
| <b>Return on Equity</b>                                     |              |               |              |              |              |               |               |              |              |               |               |              |
| Operating Income from Operations                            | \$ 24,536    | \$ 29,471     | \$ 31,670    | \$ 33,713    | \$ 38,025    | \$ 41,670     | \$ 40,942     | \$ 41,771    | \$ 44,225    | \$ 51,213     | \$ 56,995     | \$ 52,013    |
| Average Regulated Rate Base                                 | 338,666      | 388,195       | 453,401      | 514,809      | 540,927      | 539,153       | 536,767       | 588,620      | 613,205      | 636,340       | 697,757       | 727,204      |
| Rate of Return on Rate Base (Line 1 / Line 2)               | 7.24%        | 7.59%         | 6.98%        | 6.55%        | 7.03%        | 7.73%         | 7.63%         | 7.10%        | 7.21%        | 8.05%         | 8.17%         | 7.15%        |
| Less: Weighted Cost of Debt                                 | 2.61%        | 2.29%         | 2.23%        | 2.25%        | 2.22%        | 2.20%         | 2.14%         | 2.10%        | 2.05%        | 1.95%         | 1.99%         | 2.07%        |
| Less: Weighted Cost of Preferred Stock                      | 0.00%        | 0.00%         | 0.00%        | 0.00%        | 0.00%        | 0.00%         | 0.00%         | 0.00%        | 0.00%        | 0.00%         | 0.00%         | 0.00%        |
| Return Remaining for Common Stock                           | 4.63%        | 5.30%         | 4.75%        | 4.30%        | 4.81%        | 5.53%         | 5.49%         | 5.00%        | 5.16%        | 6.10%         | 6.18%         | 5.08%        |
| % of Equity in Capital Structure                            | 52.78%       | 52.67%        | 52.87%       | 52.75%       | 52.61%       | 52.54%        | 52.83%        | 52.98%       | 52.62%       | 52.75%        | 52.62%        | 52.54%       |
| <b>Actual Return on Equity</b>                              | <b>8.77%</b> | <b>10.07%</b> | <b>8.98%</b> | <b>8.15%</b> | <b>9.15%</b> | <b>10.52%</b> | <b>10.39%</b> | <b>9.44%</b> | <b>9.82%</b> | <b>11.56%</b> | <b>11.75%</b> | <b>9.67%</b> |
| <b>Authorized Return on Equity</b>                          | 10.40%       | 9.75%         | 10.00%       | 10.00%       | 10.25%       | 10.25%        | 10.25%        | 10.25%       | 10.25%       | 9.50%         | 9.50%         | 9.50%        |
| <b>Weather Normalized Earnings before Sharing</b>           |              |               |              |              |              |               |               |              |              |               |               |              |
| Operating Income from Operations                            | \$24,536     | \$29,471      | \$31,670     | \$33,713     | \$38,025     | \$41,670      | \$40,942      | \$41,771     | \$44,225     | \$51,213      | \$56,995      | \$52,013     |
| Impact of Weather on Operating Income                       | 142          | 143           | 144          | 622          | 1,262        | 1,079         | (1,288)       | (1,249)      | (855)        | (4,825)       | (1,683)       | (952)        |
| Weather Normalized Income (Line 9 - Line 11)                | \$24,678     | \$29,614      | \$31,814     | \$34,335     | \$39,287     | \$42,749      | \$39,654      | \$40,522     | \$43,370     | \$46,388      | \$55,312      | \$51,061     |
| Weather Normalized Return on Rate Base                      | 7.29%        | 7.63%         | 7.02%        | 6.67%        | 7.26%        | 7.93%         | 7.39%         | 6.87%        | 7.07%        | 7.29%         | 7.93%         | 7.02%        |
| <b>Weather Normalized Return on Equity</b>                  | <b>8.92%</b> | <b>9.54%</b>  | <b>8.76%</b> | <b>8.38%</b> | <b>9.60%</b> | <b>10.91%</b> | <b>9.93%</b>  | <b>9.86%</b> | <b>9.85%</b> | <b>9.62%</b>  | <b>11.28%</b> | <b>9.40%</b> |



Northern States Power Company  
 Electric Utility - North Dakota  
 Net Operating Income  
 (\$ in 000s)

Attachment 3

| Description                          | 2012              | 2013              | 2014              | 2015              | 2016              | 2017              | 2018              | 2019 <sup>5</sup> | 2020              | 2021              | 2022              | 2023              |
|--------------------------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Residential                          | \$ 69,329         | \$ 81,128         | \$ 81,066         | \$ 82,172         | \$ 78,298         | \$ 80,013         | \$ 82,625         | \$ 78,813         | 81,239            | 90,859            | 96,408            | 93,047            |
| Small Commercial & Industrial        | 85,328            | 96,704            | 98,244            | 101,810           | 98,996            | 99,278            | 98,195            | 91,850            | 90,637            | 103,401           | 115,100           | 105,352           |
| Large Commercial & Industrial        | 22,301            | 23,654            | 24,600            | 27,904            | 26,257            | 26,996            | 26,829            | 25,578            | 25,170            | 31,217            | 32,366            | 30,396            |
| Other <sup>1</sup>                   | 42,928            | 48,572            | 53,987            | 54,781            | 54,157            | 54,802            | 43,874            | 59,265            | 56,465            | 68,709            | 76,955            | 64,596            |
| <b>Total Revenues</b>                | <b>\$ 219,886</b> | <b>\$ 250,058</b> | <b>\$ 257,897</b> | <b>\$ 266,667</b> | <b>\$ 257,708</b> | <b>\$ 261,089</b> | <b>\$ 251,523</b> | <b>\$ 255,507</b> | <b>\$ 253,511</b> | <b>\$ 294,186</b> | <b>\$ 320,829</b> | <b>\$ 293,391</b> |
| Fuel & Prod. Expense                 | 120,355           | 134,307           | 134,955           | 127,077           | 115,476           | 112,791           | 113,334           | 110,805           | 103,376           | 126,051           | 141,648           | 118,404           |
| Gross Margins                        | \$ 99,531         | \$ 115,751        | \$ 122,942        | \$ 139,590        | \$ 142,232        | \$ 148,298        | \$ 138,189        | \$ 144,702        | \$ 150,135        | \$ 168,135        | \$ 179,181        | \$ 174,987        |
| Transmission Expense                 | 12,309            | 14,921            | 17,224            | 19,777            | 21,953            | 21,833            | 20,811            | 24,202            | 22,002            | 23,865            | 25,077            | 23,839            |
| Distribution Expense                 | 6,387             | 6,784             | 6,727             | 6,319             | 6,886             | 6,201             | 6,671             | 6,528             | 5,650             | 6,262             | 6,404             | 7,418             |
| Customer Billing                     | 4,128             | 4,121             | 4,300             | 4,198             | 3,307             | 3,319             | 3,380             | 3,379             | 3,787             | 3,976             | 3,986             | 4,531             |
| Customer Service                     | 370               | 348               | 439               | 425               | 68                | 321               | 261               | 425               | 240               | 238               | 197               | 392               |
| Sales & Marketing <sup>3</sup>       | 2                 | 1                 | 0                 | 0                 | 0                 | 0                 | 0                 | 3                 | 151               | 179               | 91                | 178               |
| Admin. & General <sup>4</sup>        | 12,969            | 15,576            | 14,664            | 15,462            | 15,380            | 16,077            | 15,966            | 15,129            | 16,909            | 16,439            | 17,238            | 19,665            |
| Depreciation                         | 20,400            | 22,295            | 25,265            | 32,204            | 33,004            | 35,910            | 36,600            | 38,069            | 46,758            | 56,698            | 64,108            | 64,072            |
| <i>% of Plant in Service</i>         | <i>2.61%</i>      | <i>2.55%</i>      | <i>2.58%</i>      | <i>2.97%</i>      | <i>2.91%</i>      | <i>3.12%</i>      | <i>3.13%</i>      | <i>2.93%</i>      | <i>3.47%</i>      | <i>4.04%</i>      | <i>4.30%</i>      | <i>4.15%</i>      |
| Property Taxes                       | 6,690             | 7,917             | 8,727             | 9,404             | 10,367            | 10,117            | 9,813             | 11,096            | 10,506            | 10,314            | 10,745            | 9,951             |
| <i>% of Plant in Service</i>         | <i>0.86%</i>      | <i>0.91%</i>      | <i>0.89%</i>      | <i>0.87%</i>      | <i>0.91%</i>      | <i>0.88%</i>      | <i>0.84%</i>      | <i>0.85%</i>      | <i>0.78%</i>      | <i>0.73%</i>      | <i>0.72%</i>      | <i>0.64%</i>      |
| Other General Taxes <sup>2</sup>     | 1,866             | 2,081             | 2,055             | 2,014             | 1,875             | 1,941             | 1,933             | 2,019             | 1,882             | 1,919             | 1,782             | 2,046             |
| Income Tax Net of Deferred           | 9,874             | 12,236            | 11,871            | 16,074            | 11,367            | 10,909            | 1,812             | 2,080             | (1,977)           | (2,968)           | (7,441)           | (9,118)           |
| <i>% of Income before Income Tax</i> | <i>28.70%</i>     | <i>29.34%</i>     | <i>27.26%</i>     | <i>32.29%</i>     | <i>23.01%</i>     | <i>20.75%</i>     | <i>4.24%</i>      | <i>4.74%</i>      | <i>-4.68%</i>     | <i>-6.15%</i>     | <i>-15.02%</i>    | <i>-21.26%</i>    |
| Net Operating Income                 | \$ 24,536         | \$ 29,471         | \$ 31,670         | \$ 33,713         | \$ 38,025         | \$ 41,670         | \$ 40,942         | \$ 41,771         | \$ 44,225         | \$ 51,213         | \$ 56,995         | \$ 52,013         |

<sup>1</sup> Includes primarily public street & highway lighting, sales to public authorities, interchange billings, other electric operating revenues.

<sup>2</sup> Includes gross earnings taxes (franchise fees) and payroll taxes.

<sup>3</sup> Includes economic development, demand side management and conservation incentive programs

<sup>4</sup> Includes other miscellaneous expenses and SFAS amortization.

<sup>5</sup> Refined

Attachment 4

| Reliability Index                                    | 2019  | 2020 | 2021  | 2022 | 2023 |
|--|-------|------|-------|------|------|
| System Average Interruption Frequency Index (SAIFI)  | 0.4   | 0.6  | 0.7   | 0.8  | 0.6  |
| System Average Interruption Duration Index (SAIDI)   | 42.2  | 51.1 | 80.7  | 67.8 | 56.6 |
| Customer Average Interruption Duration Index (CAIDI) | 109.8 | 92.8 | 120.2 | 89.4 | 99.6 |