



Maintenance Capital Update

December 16, 2022

In 2023, Northern Natural Gas plans to invest \$420 million in maintenance capital, as detailed in Appendix D. This is an increase of \$49 million since the update in 2021.

Appendix D was published in 2020 and 2021 in compliance with settlement of Northern's rate case RP19-1353. Though an annual update of Appendix D is no longer required pursuant to the settlement, Northern provides the update in response to a customer request for additional information regarding Northern's capital investment plans for 2023.

| | Updated Capital Projection | | | | | Previous Appendix D | Increase/ (Decrease) |
|---|----------------------------|-------------------|-------------------|-------------------|---------------------|------------------------|-------------------------|
| | 2020 | 2021 | 2022 | 2023 | Total | | |
| Operations | | | | | | | |
| Pipeline Assessments | \$ 65,197 | \$ 65,416 | \$ 68,928 | \$ 61,673 | \$ 261,214 | \$ 247,577 | \$ 13,637 |
| Compression Replacement | 67,288 | 59,749 | 65,804 | 11,144 | 203,985 | 193,166 | 10,819 |
| LNG Replacement | 30 | 1,529 | 8,328 | 38,375 | 48,262 | 40,844 | 7,418 |
| Underground Storage Integrity | 2,548 | - | 8,552 | - | 11,100 | 7,604 | 3,496 |
| Vintage Pipeline Replacement | 108,855 | 162,822 | 140,943 | 47,571 | 460,191 | 493,367 | (33,176) |
| MAOP Reconfirmation | - | - | 56 | 9,973 | 10,029 | - | 10,029 |
| Remote Control Valves | - | - | - | 2,242 | 2,242 | - | 2,242 |
| Total Asset Modernization | 243,918 | 289,516 | 292,611 | 170,978 | 984,752 | 982,558 | 14,465 |
| Building/Facility - Field | 7,109 | 11,771 | 6,826 | 4,100 | 29,806 | 28,671 | 1,135 |
| Pipeline Integrity | 63,642 | 40,260 | 42,532 | 24,283 | 170,717 | 182,531 | (11,814) |
| Pipeline-Shallow/Exposed Pipe Measurement | 24,150 | 23,966 | 34,009 | 30,687 | 112,812 | 99,392 | 13,420 |
| Automation/Controls | 7,269 | 14,404 | 7,860 | 8,336 | 37,869 | 44,789 | (6,920) |
| Pipeline - Relocation | 8,511 | 20,668 | 17,765 | 17,272 | 64,216 | 61,327 | 2,889 |
| Compressor Mods | 4,062 | 1,165 | 506 | 1,220 | 6,953 | 7,647 | (694) |
| Underground/LNG Storage | 19,345 | 16,183 | 15,651 | 31,481 | 82,660 | 56,846 | 25,814 |
| Measurement-Heaters | 19,657 | 10,400 | 17,814 | 9,186 | 57,057 | 57,642 | (585) |
| Valve Installation/Replacement | 5,476 | 6,591 | 11,191 | 8,565 | 31,823 | 36,395 | (4,572) |
| Corrosion Control | 7,909 | 8,783 | 20,155 | 3,070 | 39,917 | 34,581 | 5,336 |
| Odorization | 24,273 | 9,073 | 8,202 | 17,510 | 59,058 | 57,770 | 1,288 |
| Pipeline Safety Act HCA | 2,285 | 1,301 | 2,195 | 7,242 | 13,023 | 10,565 | 2,458 |
| Unit Exchange | 11,897 | 15,462 | 19,609 | 17,330 | 64,298 | 54,105 | 10,193 |
| Systems Development | 2,887 | 1,858 | 3,284 | 2,522 | 10,551 | 12,761 | (2,210) |
| Special Projects | 2,516 | 4,600 | 6,442 | 7,438 | 20,996 | 14,556 | 6,440 |
| Retirements | 10,497 | 8,331 | 5,092 | 3,134 | 27,054 | 34,989 | (7,935) |
| Risk-ESD | 8,550 | 8,594 | 4,691 | 4,500 | 26,335 | 35,062 | (8,727) |
| Trans/Mob Wrk Eqp | 4,069 | 3,620 | 9,601 | 6,894 | 24,184 | 17,907 | 6,277 |
| Information Technology | 4,215 | 3,467 | 6,927 | 3,192 | 17,801 | 16,268 | 1,533 |
| Other | 9,516 | 7,985 | 14,050 | 13,365 | 44,916 | 49,567 | (4,651) |
| Other Maintenance Capital | 13,721 | 19,416 | 19,533 | 27,653 | 80,323 | 70,769 | 9,554 |
| Total Maintenance Capital | \$ 505,474 | \$ 527,414 | \$ 566,546 | \$ 419,958 | \$ 2,007,121 | \$ 1,966,698 | \$ 52,694 |
| Previous Appendix D | 505,474 | 527,414 | 563,205 | 370,605 | 1,966,698 | | |
| Variance - Increase/(Decrease) | \$ - | \$ - | \$ 3,341 | \$ 49,353 | \$ 52,694 | | |
| Previous Appendix D Reconciliation | | | | | | | |
| Maintenance Capital Target | \$ 501,000 | \$ 369,000 | \$ 400,000 | \$ 317,000 | \$ 1,587,000 | | |
| December 2020 Update | - | 5,690 | 6,915 | 49,352 | 61,957 | | |
| March 2021 & April 2021 Update | 4,474 | 144,835 | - | - | 149,309 | | |
| December 2021 Update | - | 17,653 | 102,470 | 4,253 | 124,376 | | |
| March 2022 & April 2022 Update | - | (9,764) | 53,820 | - | 44,056 | | |
| Previous Appendix D | \$ 505,474 | \$ 527,414 | \$ 563,205 | \$ 370,605 | \$ 1,966,698 | | |

Notes:

Asset Modernization projects are listed in Exhibit 1 of the December 2022 Asset Modernization report.

Previous Appendix D is comprised of the 2020 Actuals produced in March 2021, 2021 Actuals forecast produced in March 2022, updated 2022 forecast produced in April 2022 and 2023 forecasts from the December 2021 update

Section 4 filing included capital spending of \$561,582 in 2022