Digging a Bigger Hole:

WORSENING ISSUES WITH BROADBAND INSTALLATION DAMAGE IN MINNESOTA

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ABOUT NORTH STAR POLICY ACTION

North Star Policy Action is an independent research and communications institute that is dedicated to improving the lives of everyday Minnesotans by advancing bold ideas that change the conversation and bring communities together. We develop and promote data-driven solutions to persistent problems that allow working people to thrive, no matter who they are or where they live

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Digging a Bigger Hole: Worsening Issues with Broadband Installation Damage in Minnesota

In 2024, North Star Policy Action released "Digging into Danger," a report focused on damage caused by underground drilling for broadband internet installation.[1] We found that telecom installation was the leading cause of damage to buried infrastructure in the state, frequently hitting essential natural gas and electric utilities in ways that have led to dangerous, and even deadly, consequences.

Following the publication of this report, Minnesota passed a law to improve standards for broadband installation. Authored by Senator Jennifer McEwen of Duluth and Representative Kaela Berg of Burnsville, the Broadband Safety Bill made three key changes.

First, it requires recipients of broadband grant funding to report basic information on the quality of broadband installation jobs and their use of a local workforce. It also encourages these grant recipients to promote certain best practices, such as the provision of health, retirement, and training benefits.[2]

Second, underground telecommunications installers must employ a qualified workforce when crossing or working within ten feet of existing underground utilities. To be considered qualified, installation workers must complete 40 hours of training and pass a certification exam approved by the Minnesota Department of Labor Industry (DLI) showing they can perform certain safety-critical functions, specifically excavation of existing utilities and tracking directional drill heads. This requirement begins on July 1, 2025 in the seven-county Twin Cities Metropolitan Area and takes effect statewide on January 1, 2026.[3]

In a recent legislative hearing, DLI reported that they have already approved seven different training and certification programs, including those proposed by trade associations, labor-management training funds, and contractors.[4] On February 21, 2025, the first class of ten Safety-Qualified Underground Telecommunications Installers graduated and received their "Orange Cards" from a program sponsored by the Laborers Training Center.

Finally, the 2024 law authorizes the Minnesota Public Utilities Commission (PUC) to investigate and sanction telecommunications companies for conduct that damages or unreasonably interferes with gas and electric utility infrastructure.[5]

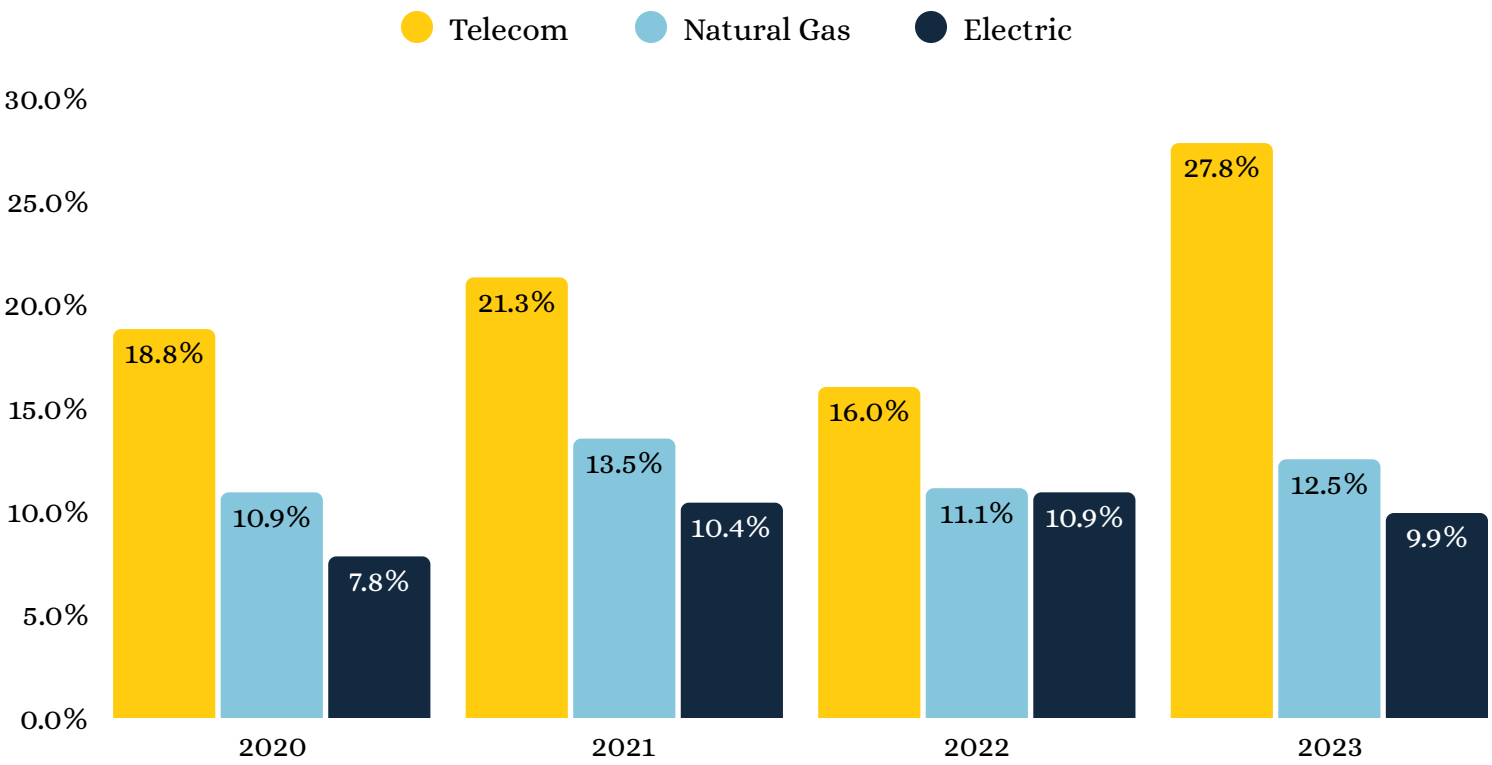
Despite many of these new standards not yet taking effect, there is already a push to roll them back or significantly weaken these standards. In serving as an update to our 2024 report, this research brief shows that failing to implement the recently passed reforms could be a huge mistake. By bringing in

more recent data on underground damage in the state, **we find that the problems associated with broadband installation are getting worse**.[6] Through these findings, we reveal the importance of Minnesota staying the course and utilizing the new standards as they were passed last year. Put simply, failing to do so could put the safety of Minnesota workers and the public at risk.

Telecom is an increasingly large leader in underground damage

Drawing on data from the Common Ground Alliance's DIRT Interactive Dashboard, Figure 1 shows how much of the total underground damage in Minnesota can be attributed to the three leading sources of that damage: telecom, natural gas, and electric infrastructure installation.[7] This analysis reveals the increasingly large proportion of this harm caused by telecom installation, with a particularly troubling jump taking place in 2023. By contrast, the share of damage stemming from natural gas and electric infrastructure installation has remained far more stable.

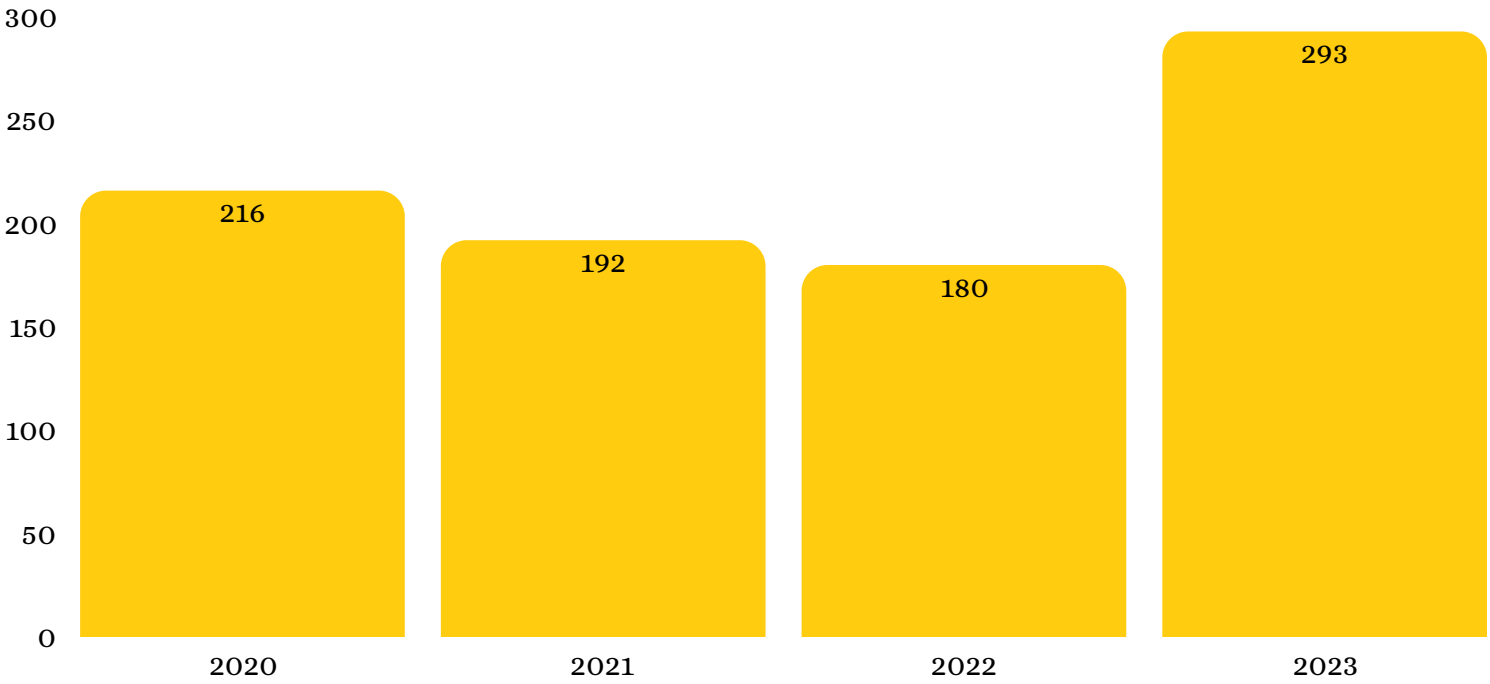
Figure 1. Source of All Underground Damage Incidents in Minnesota, 2020 to 2023



Telecom installation is more routinely hitting natural gas lines

The damage done by telecom installation is particularly concerning when it hits infrastructure that is essential for Minnesotans and that poses a danger to their safety when struck. Unfortunately, this is the type of damage from telecom installation that rose the most in 2023. There were 113 more strikes to natural gas utilities caused by telecom installation in 2023 than there were in 2022, representing a 63% jump.

Figure 2. Telecom Strikes to Natural Gas Utilities in Minnesota, 2020 to 2023



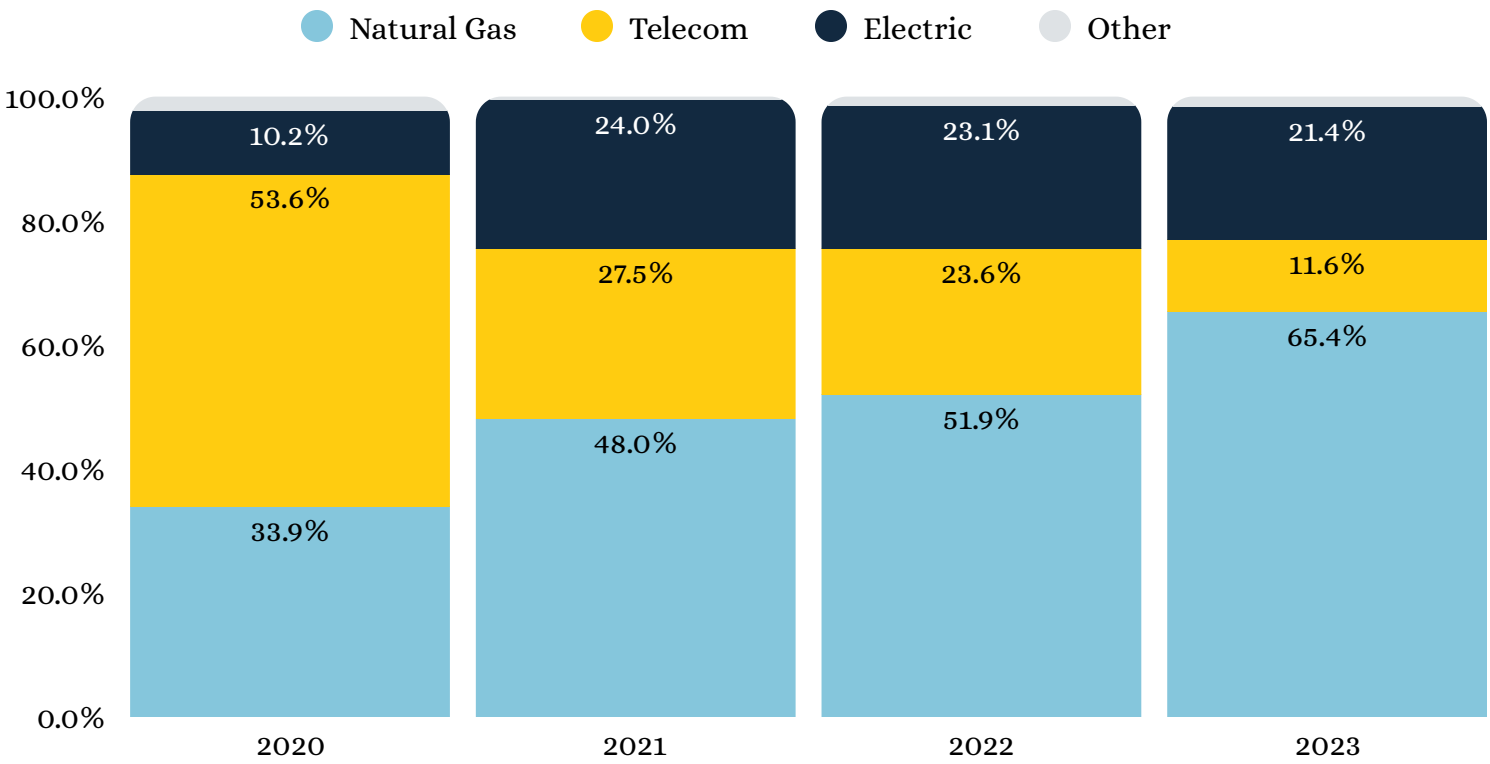
From 2022 to 2023, the number of telecom strikes on natural gas utilities rose by 63%.

When this increase is examined as a share of all telecom installation damage done in the state, it becomes clear that telecom has a particularly growing problem with striking natural gas utilities. Where just over a third of all damage caused during the installation of telecom infrastructure was done to natural gas utilities in 2020, that share had jumped to half in 2020 and 2021, and then nearly two-thirds in 2023.

While the Common Ground Alliance has not yet made 2024 data available, there is reason to believe this issue continued to get worse in 2024. According to testimony from CenterPoint Energy, Minnesota's largest natural gas utility, telecommunications-caused damage to their infrastructure climbed dramatically last year. Specifically, telecommunications installation strikes on CenterPoint's natural gas lines rose from 213 in 2023 to 342 in 2024, marking a 60% increase.[8]

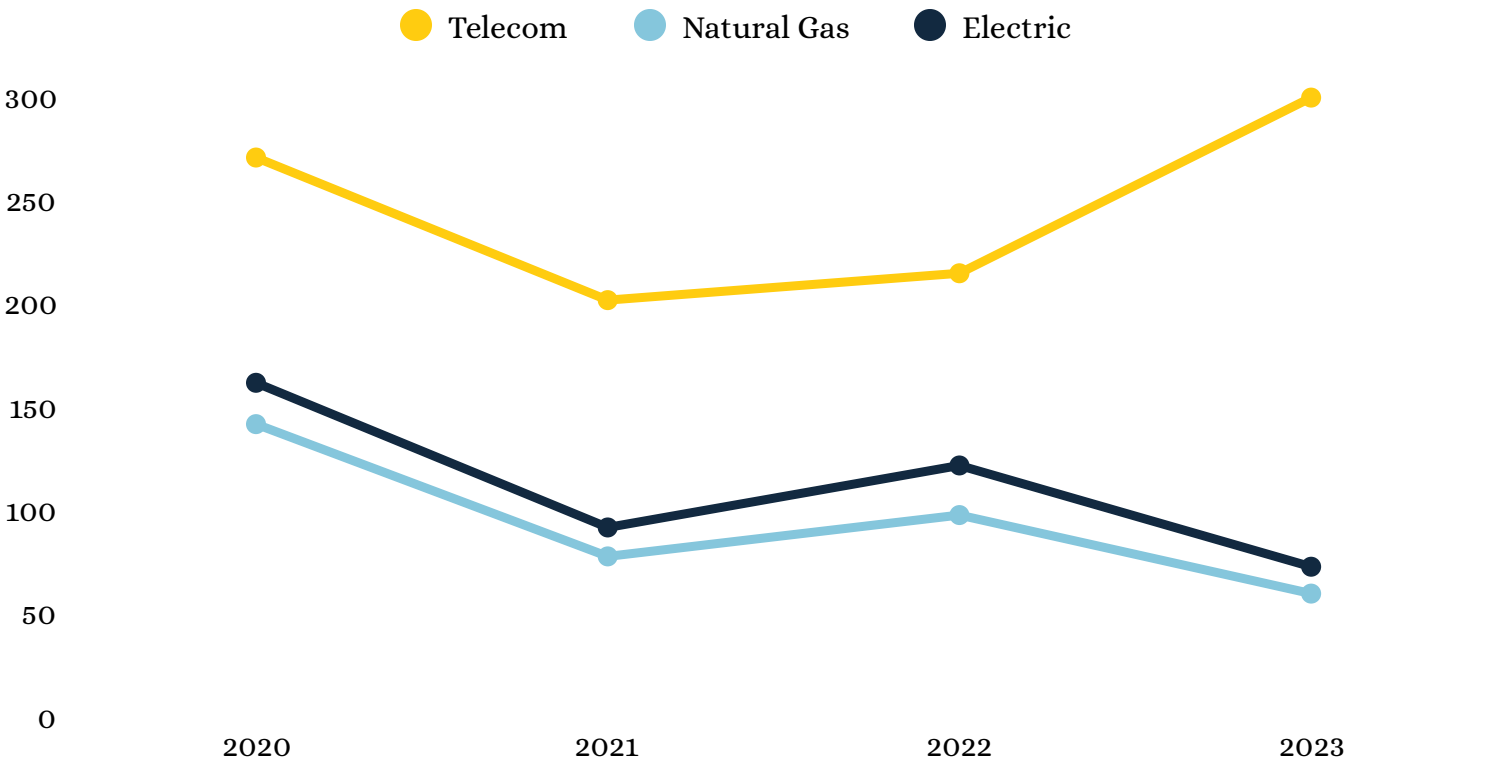
Damage appears to have risen again last year. CenterPoint Energy data reveals that telecommunications strikes to their natural gas lines climbed by 60% from 2023 to 2024.

Figure 3. Facility Damaged by Telecom Installation Incidents in Minnesota, 2020 to 2023



Excavator error comprises a growing share of telecom damage

Figure 4. All Underground Damage Incidents Caused by Excavator Error in Minnesota, 2020 to 2023



When damage to underground infrastructure occurs, there are two possible sources. First, it may come from mistakes made by the individuals who are doing the actual drilling. Notably, this is the group that was focused on in the new standards Minnesota passed in 2024. Alternatively, damage may be caused by errors committed by the locators who mark areas that excavators should avoid.

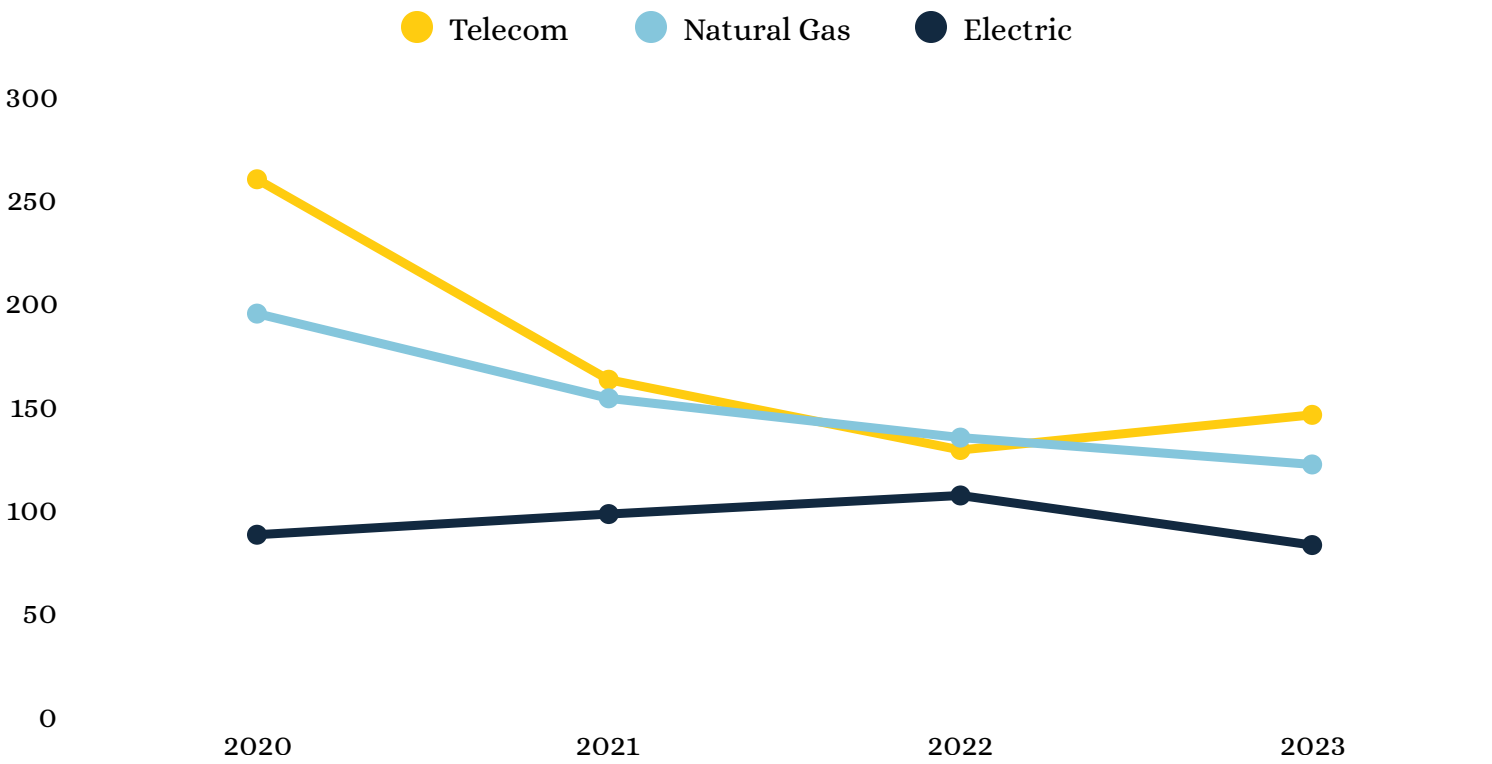
For damage done during telecom installation, the excavators are an increasingly dominant part of the problem.

Figure 4 shows that the amount of damage caused by excavator errors during telecom installation rose sharply in 2023.[9] By contrast, natural gas and electric utilities both saw their number of excavator errors decline in 2023.

From 2020 to 2023, only telecom saw damage caused by excavator errors increase. At the same time, damage from telecom locator errors declined.

The story changes when turning to locator errors. In this case, all three industries have witnessed a decline in errors leading to damage, though this decrease has been the most substantial for telecom. It would seem that the 2024 legislation's focus on providing training to address excavator errors was well-placed, underscoring the importance of fully implementing it.

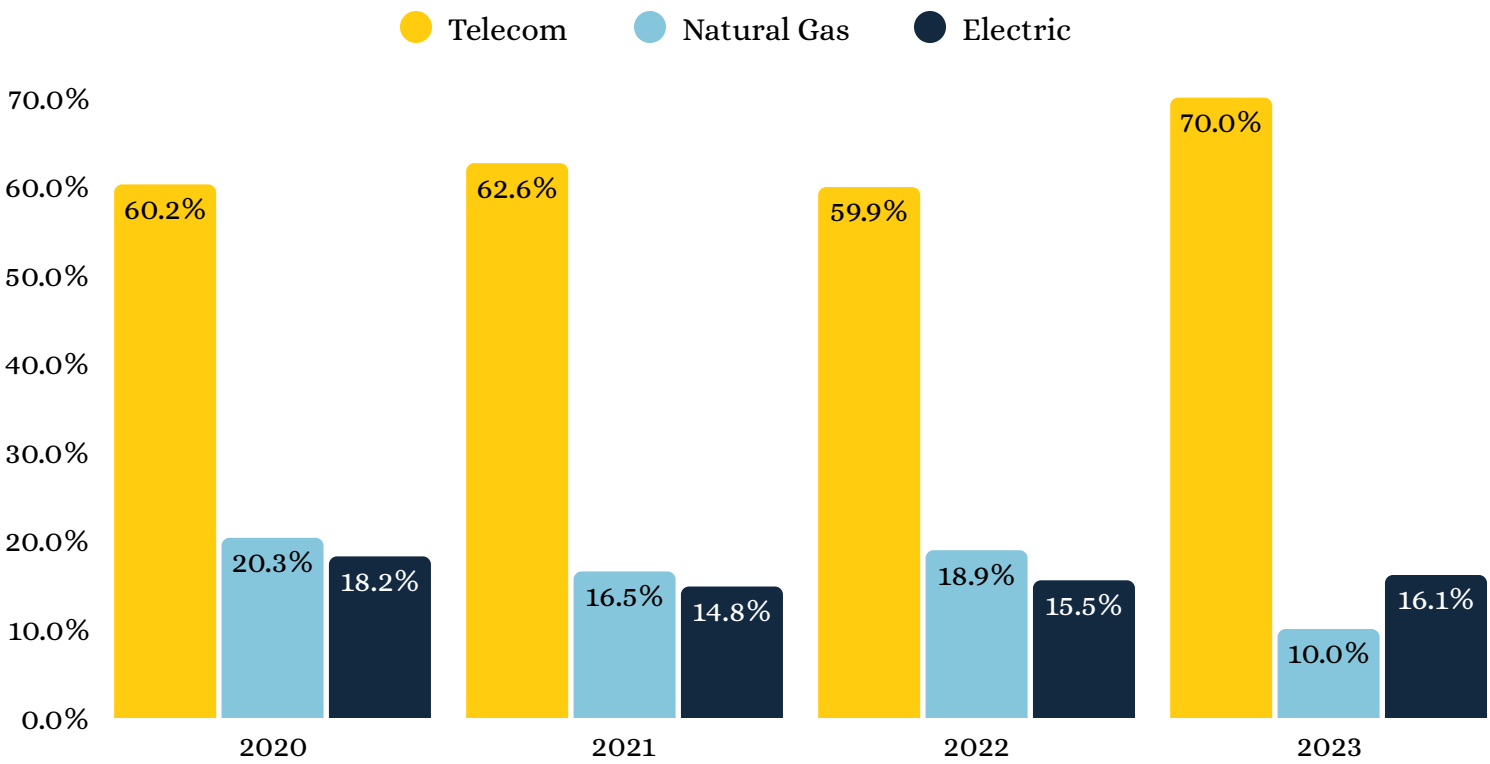
Figure 5. All Underground Damage Incidents Caused by Locator Error in Minnesota, 2020 to 2023



Drilling damage is uniquely tied to telecom

Underground electric, gas, and telecom lines are often installed using Horizontal Directional Drilling, a construction technique that is designed to minimize disturbance and damage to the surrounding environment. Electric and gas distribution contractors regularly employ directional drilling to install conduits and pipelines without damaging underground infrastructure. Unfortunately, telecom contractors have a poorer track record of deploying what should be a safe technology.[10]

Figure 6. Source of All Underground Damage Caused by Drilling in Minnesota, 2020 to 2023

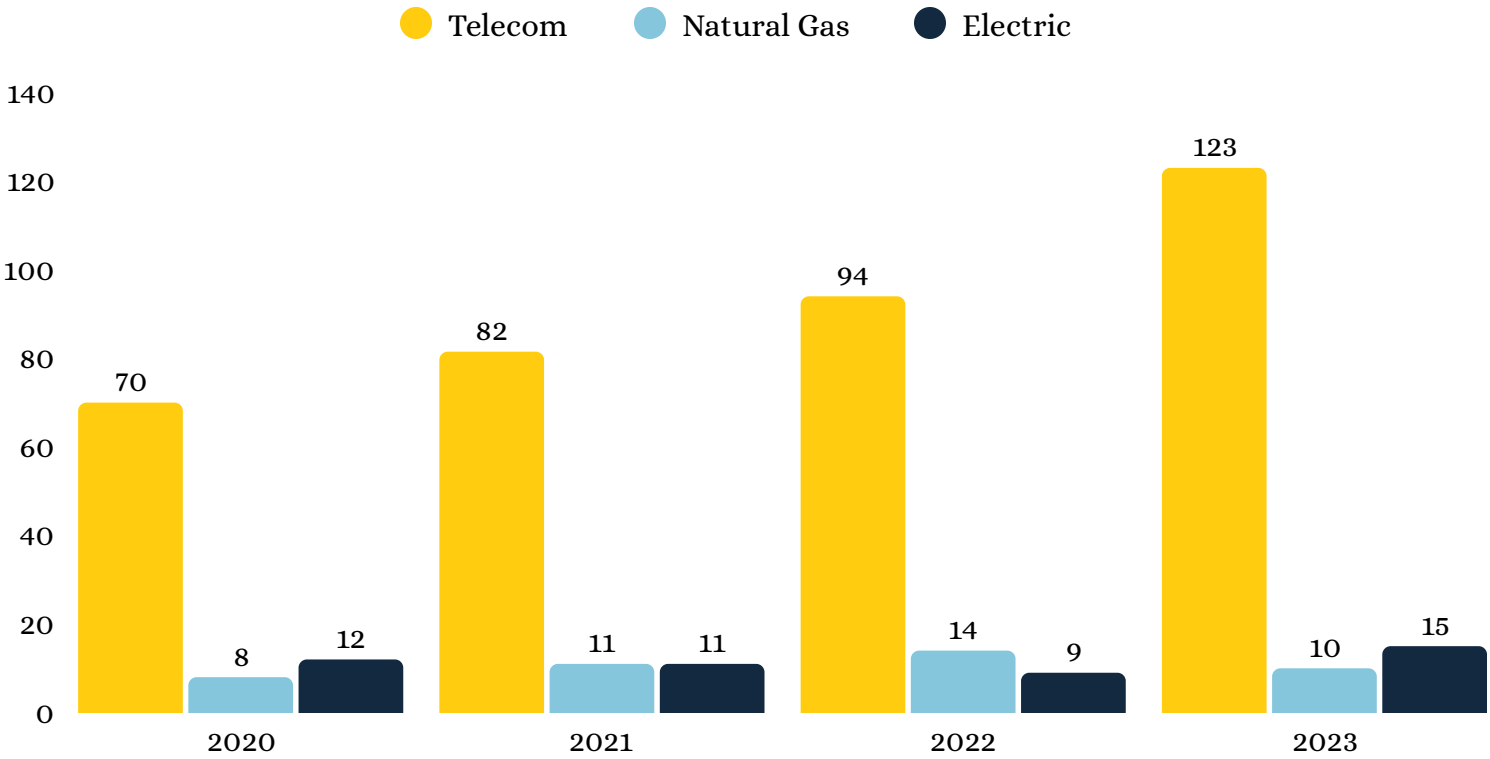


While telecom installation dominated the drilling damage done to Minnesota's underground infrastructure from 2020 to 2022, this dominance became even more pronounced in 2023. As seen in Figure 6, telecom installation was responsible for 7-in-10 drilling-related damages that year.

Telecom damage is particularly bad at the intersection of drilling and excavator errors

The sharpest rise in telecom damage has come at the intersection of the areas most clearly addressed by the new safety standards included in the 2024 legislation: excavator errors committed while drilling. While natural gas and electric installation errors have stayed relatively steady in this area, telecom installation has seen year-over-year growth in each of the last four years. In 2023, excavator drilling errors committed during telecom installation were five times greater than those occurring during natural gas and electric installation *combined*.

Figure 7. All Underground Damage Incidents Caused by Excavator Errors While Drilling in Minnesota, 2020 to 2023



The greatest jump in telecom installation damage occurred in the area most directly addressed by Minnesota's 2024 Broadband Safety Law: excavator errors committed while drilling.

Not the time to turn back

The analysis above clearly demonstrates the need to move forward with implementing the broadband installation safety standards passed in 2024. With damage from telecom reaching new heights in 2023, it is time for a change in the North Star State.

While the data included in this analysis does not extend to 2024, there is little reason to believe the trend identified here improved last year. Echoing the concerns raised in the aforementioned letter from the City of Bloomington and the data from CenterPoint Energy, a recent report focusing on broadband contractors working in that city found that one contractor was cited more than 400 times for damaging the public right of way in one four-month period.[14] Many of these citations occurred in the same location just weeks apart, indicating that the contractor knew they were making mistakes but were either unwilling or unable to respond to them.

As CenterPoint Energy pointed out in their letter, absent the implementation of the new safety standards, this problem is only going to get worse as the amount of telecom installation is set to rise rapidly in the coming years. Minnesota cannot afford to let that happen. The state has taken an

important step in passing commonsense safety and training standards that better protect the public and workers. It is time to let those standards begin taking course.

The Danger Beneath the Data: Testimony from Cities and Utilities

In both the scope of underground damage and year-over-year trends, telecom installation stands out. It is involved in the greatest number of incidents and its dominance in underground damage caused is growing. While the numbers presented above can feel abstract, it is important to understand the real harm that this damage can do. This reality was reflected in several letters submitted to the State Legislature by both cities and utility companies in opposition to the 2024 Broadband Safety Law being weakened.

Drawing on his multi-decade career in underground utilities, Keven Maxa pointed to issues with telecoms installation being done by "inexperienced and untrained" workers who were "the cheapest available" and "operate in an unsafe manner." Writing in his role as the President of the Prairieland Utility Coordinating Committee and Engineering Supervisor for Austin Utilities, Maxa noted that this undertrained workforce led to utilities being hit, "including gas, far more often than should happen." Aligning with our data, Maxa further indicated that the most common issue came from excavator error, and called the 40-hour safety training requirement included in the 2024 law something that has been "sorely needed for years."[11]

In their letter, CenterPoint Energy added greater urgency to this concern. As the largest natural gas utility in the state, they not only discussed the "substantial increase in strikes from broadband installation" that they have seen but also pointed to an even more worrying future. As they put it "The amount of telecommunication installation is growing rapidly, and so is the damage from installation. Without safety certification requirements, the damages will continue to increase."[12]

Perhaps the most striking concerns came from a letter written by the City of Bloomington. While they indicated that telecom installation has increased in the city, they further point out that the rise in utility strikes from this installation has outpaced the growth in dig permits, echoing the data's indication of a growing problem. In one particularly alarming incident, they describe a fiber installation crew striking an electric line, and then later hitting a gas utility line that same day. Rather than calling 911 as required, the crew attempted to patch the damage with duct tape and hose clamps before reburying it. The issue was only discovered the next morning when a CenterPoint Energy watchdog smelled gas at the worksite. Beyond this near-disaster, Bloomington reported numerous safety violations, including workers using extension ladders in active streets without traffic control, handling asphalt in flip-flops, and an arc flash incident that singed a worker's facial hair. Given these dangers, Bloomington called for the safety training requirements to be kept in place, viewing them as essential to protecting both workers and the public.[13]

Notes

[1] "Digging into Danger," North Star Policy Action, April 15, 2024, https://northstarpolicy.org/digging-into-danger/.

[2] See Minnesota Statutes 116J.395 Subd. 6 & Subd. 9 https://www.revisor.mn.gov/statutes/cite/116J.395.

[3] See Minnesota Statutes 326B.198 https://www.revisor.mn.gov/statutes/cite/326B.198. For information on DLI's safety program requirements, see: https://www.dli.mn.gov/broadband

[4] See details for this hearing, including video testimony from DLI, at https://www.house.mn.gov/hjvid/94/898954.

[5] See Minnesota Statutes 216B.17 Subd. 9 https://www.revisor.mn.gov/statutes/cite/216B.17.

[6] The update provided in this analysis is the inclusion of data from 2023. Our previous report only included data from 2020 to 2022. At the point of the publication of this brief, data for 2024 was not available.

[7] All data on buried infrastructure damage is taken from the Common Ground Alliance's DIRT Interactive Dashboard, found at https://commongroundalliance.com/DIRT-dashboard. In this analysis, our use of the "telecom" includes broadband, cable, telephone, and other telecommunications infrastructure which are categorized in DIRT data as "Telecommunications" or "Cable TV. In general, when this analysis refers to the share of damage caused by a source, we do not include any damage caused by the sources labeled as unknown/other in the DIRT data.

[8] Crystal Gorres, Testimony to Minnesota House Agricultural Finance and Policy Committee, March 5, 2025, https://www.house.mn.gov/hjvid/94/899077.

[9] The analysis for excavator error focuses on incidents in the DIRT Dashboard where the root cause group is identified as "excavating", "invalid use of request", and "no locate request."

[10] The analysis for drilling damage focuses on incidents in the DIRT Dashboard where the equipment type is identified as "boring", "directional", or "drilling". Incidents in these categories are combined for the purposes of this analysis.

[11] Kevin Maxa, Letter to House Minnesota Workforce, Labor, and Economic Development Finance and Policy Committee, February 20, 2025, https://www.house.mn.gov/comm/docs/zoQXhAVXz0_KynVFcYm-EQpdf.

[12] Jamie Fitzke and Crystal Gorres, Letter to Minnesota House Workforce, Labor, and Economic Development Finance and Policy Committee, February 18, 2025, https://www.house.mn.gov/comm/docs/1cVb8nlCFkSecfmQVl5hXA.pdf.

[13] Julie M. Long, Letter to Minnesota House Regarding HF47, February 15, 2025, https://drive.google.com/file/d/1WpnS_0fhlH4cBydom6_uOqwf2mmGA_6J/view?usp=sharing.

[14] "The gigapower gamble: How AT&T and BlackRock are Undermining Broadband Quality, Safety and Jobs in Arizona," Communications Workers of America, November 21, 2024, https://cwa-union.org/sites/default/files/2024-11/20241120_thegigapowergamble_printable.pdf.

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