WILDFIRE RISK AND MITIGATION PROGRAM

I. INTRODUCTION

Wildfire risk is an evolving risk for electric utilities, and the Company is planning future investments to mitigate such risk. It is important for the Commission to understand how the Company is responding to this important issue that impacts the distribution system. The Company anticipates making some investments during 2025 and then increasing those investments in 2026. Given that timing, those planned investments are not reflected in the 2024 historic test year of our currently pending rate case in Docket No. EL25-024. The Company is instead seeking recovery of qualifying investments and costs related to our wildfire mitigation program in this year's Infrastructure Rider. We explain below how the Company evaluates wildfire risk, our evaluation of wildfire risk in South Dakota specifically, and efforts the Company is undertaking to mitigate wildfire risk.

II. WILDFIRE RISK

Xcel Energy and other electric utilities generate, transmit, and distribute high voltage electricity across electric transmission and distribution lines. It is a practical reality of providing electric utility service, including in South Dakota, that utilities will have facilities in areas that have wildfire risk.

Xcel Energy's goal is to prevent and eliminate catastrophic wildfires associated with our assets. By taking reasonable steps to mitigate the risk of wildfires, the Company can improve the resiliency of its own systems against wildfire risk, while also reducing the risk of wildfire impacts to customers and communities near our infrastructure. In addition, wildfire mitigation investments are important to managing the costs of the Company's insurance and financial health. Many of the Company's wildfire investments will also improve overall reliability, including on blue sky days and during periods of non-wildfire extreme weather.

Given the catastrophic damages (both property and third party) in the electric utility industry arising out of alleged liability for damages caused by wildfire, excess liability insurance is increasingly becoming more difficult to obtain, or when available, at elevated premiums. The Company is not immune to this trend. One approach the Company is taking to help mitigate against a trend of increasing insurance costs for electric utilities is to develop and implement a wildfire risk mitigation program. The Company provides information regarding its risk mitigation efforts to underwriters

when negotiating terms and premiums for its insurance program, including information regarding wildfire risk. The expectation is that this will help mitigate increased rates and promote the continued availability of insurance. Conversely, if we do not implement a comprehensive wildfire risk mitigation program, the costs of insurance are expected to be substantially higher, which would impact customers in all the jurisdictions in which Xcel Energy's operating companies provide electrical service, including South Dakota.

The United States is in a period of increasing wildfire risk. Beginning in the 2000s, the United States started experiencing an increase in destructive wildfire, as measured by both the number of structures burned and the number of acres burned. Between 2000 and 2022, the average number of acres burned per year was more than double the average annual acreage burned in the 1990s.[1] This trend of wildfires consuming more acres than was the case in prior decades has continued. While 2023 was a relatively mild year, the National Interagency Fire Center reported that 8,924,884 acres burned in 2024, which is higher than any single year between 1983 and 2000. More than 10 million acres burned in 2020, 2017, and 2015.[2] The increase in wildfires is largely the result of warmer weather, drought conditions and high winds, and increased development in wildland urban interface (WUI).

Wildfires are commonly thought of as occurring in forests, and most of the large wildfires in South Dakota history have been in the Black Hills. However, there are some smaller forested areas in the eastern part of the state, and wildfires, including significant ones, can also occur in grasslands and croplands. As South Dakota Wildland Fire notes on its website, the prairie and forest ecosystems in South Dakota have "historically seen frequent occurrences of wildfire in both grass and timber fuel models."[3] In its summary of the history of wildfires in South Dakota, the agency specifically references a particularly significant 1947 prairie fire that burned 250,000 acres across three counties in central South Dakota.

In terms of recent weather trends, the South Dakota State University Extension Service's State Climatologist reported that 2024 was the fifth warmest year in the 130 years for which there is a record, with the southeastern area of the state having its fourth warmest year on record.[4] In its Wildfire Action Plan, issued in 2014 and updated in 2022, South Dakota Game, Fish, and Parks presented forecasts for

[1] Anne A. Riddle, Wildfire Statistics, Cong. Rsch. Serv., IFI0244, June 1, 2023.
[2] Wildfires and Acres | National Interagency Fire Center.
[3] SD Wildland Fire | HISTORY
[4] 2024 Annual Climate Review

increased temperatures in future years and predicting that drought conditions are likely to be more common in South Dakota.[5]

It is appropriate for the Company to analyze wildfire risk in the state and implement appropriate mitigation measures given that wildfires are a possibility and in response to trends and changing weather patterns, including in South Dakota. Doing so will reduce the risk of damage to South Dakota businesses and residents and will also help the Company keep insurance costs lower than they would be without such efforts.

III. EVALUATION OF WILDFIRE RISK

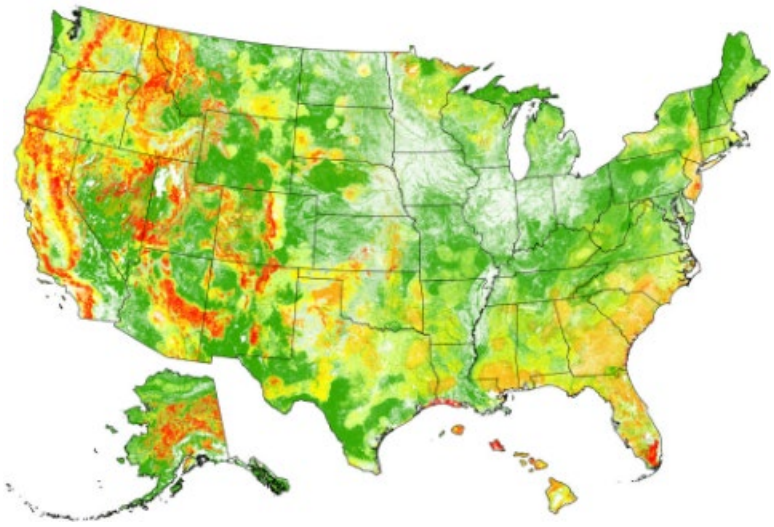
Xcel Energy evaluates wildfire risk as the product of both the likelihood of a wildfire and the magnitude of the damages that would result if there were one. Both factors need to be considered when evaluating risk and determining mitigation responses. For example, an area with only a moderate probability of having wildfires where Company lines are located may be of significant concern when prioritizing mitigation projects because it contains homes and businesses that would be at risk if there were a fire. Conversely, an area with an equal or greater likelihood of fire, but distant from human population or infrastructure, could be a lower priority.

A key part of the Company's efforts to analyze the wildfire risk in its service territories was the Company's retention of an independent third-party consultant, EDM International, Inc. (EDM), to develop a geospatial wildfire risk map of the Company's service territory, including South Dakota. EDM has expertise with respect to wildfire risk analysis and mapping. EDM used data, known as wildfire risk outputs (WRO), available from wildfirerisk.org. This data was created by the United States Forest Service (USFS) (part of the United States Department of Agriculture) at the direction of Congress for the express purpose of providing guidance and mitigation prioritization assistance to elected officials, land use planners, fire managers, and others.

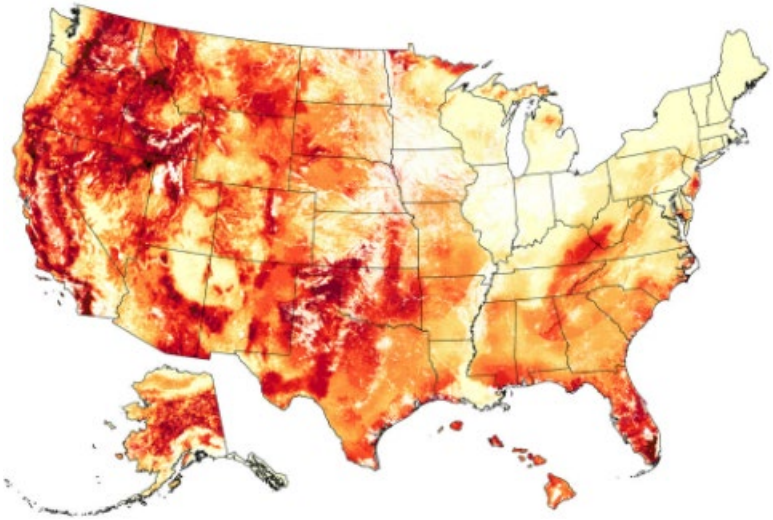
EDM utilized the following baseline data:

- **Wildfire Hazard Potential – WHP**: An index that quantifies the relative potential for wildfire that may be difficult to control, used as a measure to help prioritize where fuel treatments may be needed (WRO, 2024).

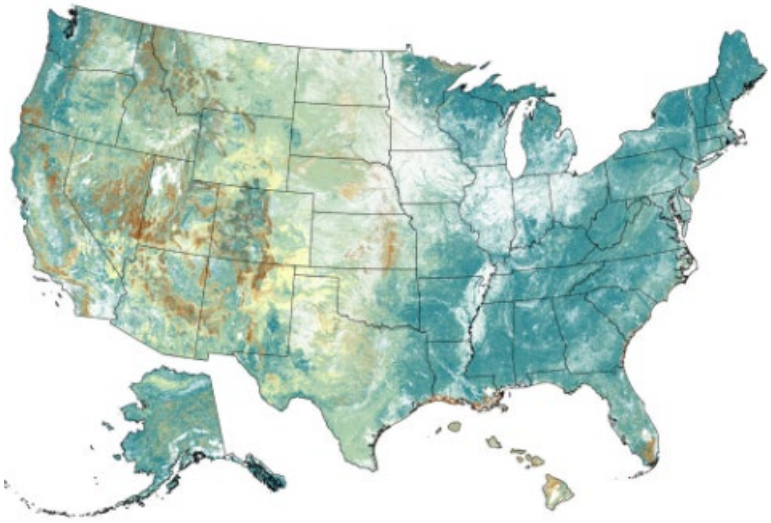
[5] South Dakota Wildlife Action Plan; Wildlife Action Plan | South Dakota Game, Fish, and Parks, Ch. 5, pgs. 95 to 102.



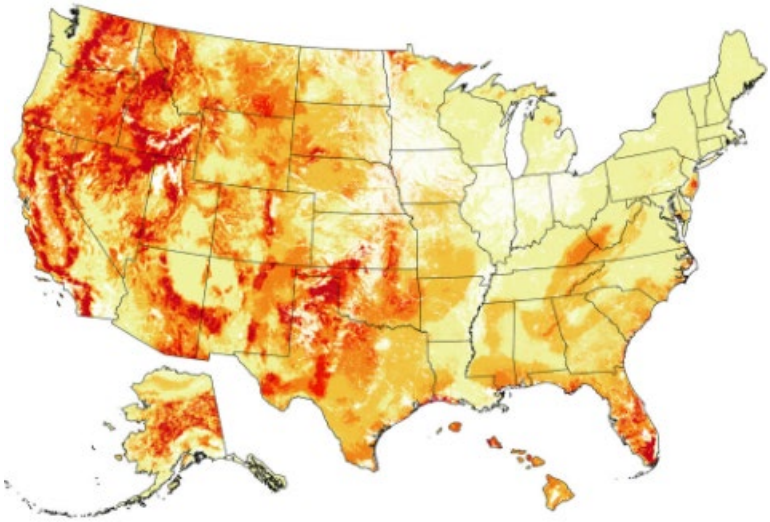
- **Burn Probability – BP (or Wildfire Likelihood):** The annual probability of wildfire burning in a specific location (WRO, 2024).



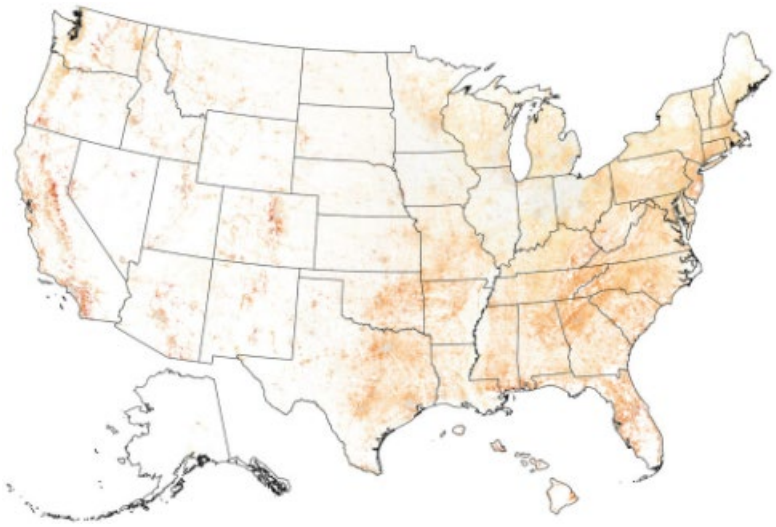
- **Conditional Flame Length – CFL:** Most likely flame length at a given location if a fire occurs, based on all simulated fires; an average measure of wildfire intensity (WRO, 2024).



- **Risk to Potential Structures - RPS (or Risk to Homes):** A measure that integrates wildfire likelihood and intensity with generalized consequences to a home on every pixel. For every place on the landscape, it poses the hypothetical question, "What would be the relative risk to a house if one existed here (WRO, 2024)?"



- **Housing Unit Risk – HU Risk:** This layer incorporates all primary elements of wildfire risk. It integrates wildfire likelihood and intensity with the generalized susceptibility of homes, and it also incorporates housing density (WRO, 2024).



The first output EDM created based on its analysis was to assign High Fire Area (HFA) scores to areas where the Company has infrastructure. This was done at a granular level. These scores were based on the WROs and were: (1) Zero/Fire-Resistant; (2) Very Low; (3) Low; (4) Moderate; (5) High; and (6) Very High. Then, the HFAs were used to create less granular groupings called fire tiers. The fire tiers are:

- **Fire-Resistant**: Areas with significant human development and/or surfaces resistant to fire. Examples include bodies of water and waterways (e.g., lakes, rivers, etc.), dense urban areas covered by buildings and surfaces covered in asphalt/concrete (e.g., parking lots, surface streets, freeways, etc.), irrigated agricultural fields, industrial areas, and other fire-resistant surfaces.

- **Low**: Areas of human development and disturbance that reduce the likelihood of a large, destructive wildfire. In general, urban and semi-urban areas can be classified as low, as well as barren ground, gravel pits, plowed fields, feed lots, golf courses, and railroad yards, and other areas of broken fuel continuity. A catastrophic wildfire still is possible in areas designated as low depending on conditions, including severity and fire suppression resource availability.

- **Moderate:** Areas where wildfire may cause significant damage to human infrastructure due to fuel continuity and/or terrain.

- **High**: Areas where fuel continuity and population density are such that a wildfire is more likely to become a destructive or catastrophic event.

The final step was to create an operationalized wildfire risk map with three tiers. On this map, the Fire Resistant and Low tiers are combined into Tier 1, the moderate tier is designated as Tier 2, and the high tier is Tier 3. The Company also made other changes to make the map useful for mitigation planning.

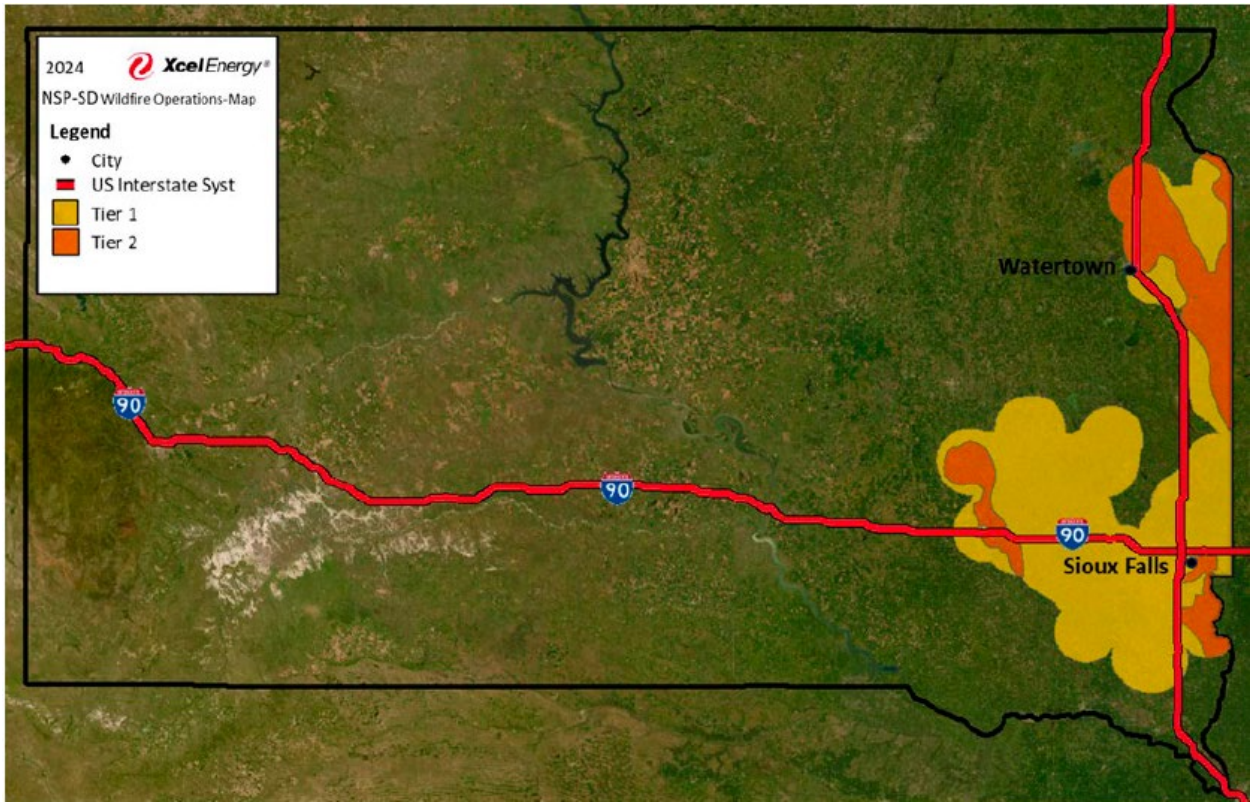
To make the map operationally useful, modifications were made to avoid having multiple categories impact the same lines. For example, if a distribution feeder is predominately located in an area categorized as "moderate" but also passes through small amounts of areas designated as "low," the entire risk area adjacent to the feeder was adjusted to "moderate." This was done because, from an operational perspective, it does not make sense to have multiple designations apply to a single line. It would not be practical or efficient to attempt to adopt different fire risk mitigation practices for various portions of the same line.

IV. RESULTS FOR SOUTH DAKOTA

The majority of areas covered in the Xcel Energy Wildfire Operations Map for South Dakota are designated as Tier 1 (lower wildfire risk), some areas are designated as Tier 2 (moderate wildfire risk), and no areas are designated as Tier 3 (higher wildfire risk). In general, Tier 2 areas are where wildfires may cause significant damage due to fuel continuity, terrain, and/or the proximity of human infrastructure. Wildfire behavior and extent in Tier 2 areas are dependent on an extensive array of variables, including fuel types, fuel availability, fuel density, fuel continuity, fuel moisture, terrain, severity of fire weather conditions (e.g., wind, relative humidity, temperature, etc.), and fire suppression resources availability and response times. It is important to note that significant areas of Tiers 1 and 2 in South Dakota are covered by agricultural or crop lands which can pose a transitory or ephemeral risk of wildfire. Under certain conditions, wildfires on such lands can have meaningful impacts. High temperatures and dry conditions can result in tinder dry crops. Combined with high winds and an ignition source, crop land fire can carry and spread embers posing risk to communities.

Figure 1 below depicts the Wildfire Operations Map for South Dakota. Areas included in the Wildfire Operations Map analysis encompass a 20-mile buffer around Xcel Energy assets providing a wider understanding of the risk posed to surrounding areas that could be impacted by fire on the landscape, both for ignition mitigation and asset protection purposes.

Figure 1: Wildfire Operations Map for South Dakota



V. APPROACH TO MITIGATION ACTIVITIES

NSP's decision-making regarding wildfire mitigation is based on three key factors: (1) risk reduction; (2) operational constraints, and (3) customer impacts. The Company determines what mitigation will most efficiently maximize wildfire risk reduction. Operational constraints require the Company to consider possible mitigation measures in the light of practical limitations. The Company must consider factors such as project lead times, contractor availability, staffing levels, seasonal variables, the needs of preexisting projects, permitting, and land access and use restrictions. Of course, some unexpected issues will arise, but it is important to consider practical limitations to the extent they can be known when planning.

Wildfire mitigation is an important activity for maintaining safe, reliable, and cost-effective service; however, there are also other important types of investment and operations and maintenance spending. Impacts to customers have to be considered and wildfire mitigation needs to be balanced against other important areas of investment.

The mitigation measures and tools the Company can deploy fit into four broad categories:

- **Situational Awareness:** Monitoring conditions is one of the many ways the Company can better predict wildfire risks and follow real-time weather conditions, improving the Company's ability to identify, assess, and respond to physical or environmental hazards, including wildfires. In particular, these efforts include enhancing the Company's internal meteorological capabilities by starting up a new team focused on wildfire prediction and analysis, installing automated weather stations, implementing new fire modeling software, and deploying artificial intelligence (AI) enabled cameras on lines to look for smoke.

- **System Resilience**: These mitigation measures involve the Company making physical investments in infrastructure to directly reduce the risk of wildfire ignitions, also often referred to as "system hardening," and include: a program to replace small diameter and open wire distribution conductors, inspection and pole replacement in Tier 2 and 3 areas (in South Dakota, just Tier 2), inspection and assessments of lines, including overhead pole assessment (OPA) and pole loading and clearance (PL&C) assessment.

- **Operational Mitigations:** Operational mitigation measures involve the Company making adjustments to how it operates its system in order to reduce the risk of wildfire ignitions. Operational mitigation measures the Company plans to employ include the Enhanced Powerline Safety Settings Program (EPSS), which involves activating a wildfire-specific mode for relays and reclosers during periods of heightened risk and the Public Safety Power Shutoff Plan (PSPS), which de-energizes relevant assets as a last resort during periods of extreme wildfire risk.[6]

- **Customer Support:** This involves the Company directly informing customers of wildfire risk and mitigation activities and providing assistance to customers to improve their wildfire resiliency. The Company plans to communicate with customers during wildfire events and periods of extreme risk, particularly with regard to any possible uses of PSPS. The Company also plans to engage in dialogue regarding its plans with South Dakota critical customers and state, county, and municipal public safety agencies.

[6] Other utilities also use PSPS as a preventative measure when there is extreme wildfire risk.

While the Company has a history of responsibly managing its assets in a way that reduces the risk of wildfires, including through some of the ongoing asset health and reliability investment programming and our regular vegetation management activities, our dedicated wildfire mitigation program is relatively new. The Company anticipates making some investments during 2025 and then increasing those investments in 2026. The Company's planned 2025 and 2026 investments fall into the four categories introduced above, as described in more detail below.

A. Situational Awareness

"Situational awareness" generally refers to being aware of the changes caused by events in the environment. Specific to Xcel Energy, situational awareness is the ability to perceive, understand, and respond to a physical or environmental hazard. Wildfires are an environmental hazard. Xcel Energy collects a variety of data to inform its situational awareness, some of which is focused on pre-ignition conditions and some of which is focused on data after an ignition occurs. Data can include weather conditions, fire location, fuel moisture, weather warnings (red flag, high wind, fire watch), proximity to Xcel Energy and community assets, social media reports, employee or responder communications or reports, still pictures and videos, employee location, vendor location, live or streaming news media video feeds, law enforcement communications, state and local emergency operations center feeds, and condition reports from telephone, email, and in person communication. Xcel Energy is investing in a variety of tools to improve situational awareness.

1. Artificial Intelligence

One tool related to situational awareness the Company plans to add is artificial intelligence (AI) cameras. AI-equipped cameras assist with early wildfire detection by rotating 360 degrees every minute and using AI to identify smoke plumes. Once smoke is detected, an alert is sent to the Company's public safety partners, who monitor that area, as well as to the Company itself. The cameras also provide triangulation capability across remote and/or higher risk areas. The AI cameras are important situational awareness tools, as they assist with early detection, which can in turn trigger more rapid deployment of fire suppression resources and help reduce the consequences of an ignition – whether related to utility equipment or from other human or environmental causes. This is a tool that affects the risk calculation discussed above.

Xcel Energy has been using such AI cameras since 2022. There are 114 installed in Colorado and 29 in Texas. The Company plans to install 4 AI cameras in 2026 in its South Dakota service territory.

2. Weather Stations

Another tool the Company is deploying to improve situational awareness is weather stations. Weather stations are used to gather real-time data on conditions that significantly increase wildfire risk as well as potential for equipment failure. This data supports wildfire mitigation efforts in several ways. First, it helps identify high-risk conditions. Weather stations monitor factors like temperature, humidity, wind speed and direction on a much more granular basis than the Company is able to do today. By analyzing this data, we can identify periods of high fire danger, such as low humidity with strong winds, which may also indicate low fuel moisture levels. This allows the Company to take proactive measures like instituting operational wildfire mitigations in targeted areas of high fire danger to mitigate risk, in addition to identifying areas where we should prioritize wildfire mitigation efforts.

Second, weather stations allow us to assess equipment health with weather data. For example, high winds can put stress on overhead electric facilities, and extreme heat can affect transformer performance. By correlating weather data with equipment issues, we can identify potential problems and take steps to prevent outages or wildfires caused by equipment failure.

Finally, weather stations are key resources for developing and validating models of wildfire risk. In essence, weather stations provide us with vital real-time information to proactively manage wildfire risk and improve safety of infrastructure and the communities we serve.

The Company currently relies on weather stations installed by other agencies (for example, the Remote Automated Weather Station (RAWS) network and National Weather Service ASOS network) for non-wildfire risk assessment objectives, along with publicly available meteorological data. As the Company enhances its wildfire-related situational awareness, we have decided to pursue our own weather stations to obtain additional and more granular data.

Utility wildfire mitigation activities benefit from more granular, area-specific data, as well as historical data for establishing trends, and this data is not publicly available. Therefore, it is beneficial for a utility to have additional observation systems such as

weather instrumentation and cameras to collect data and assess risk for utility assets. Utility-owned observing systems (i.e., weather instrumentation and cameras) can be situated as close as possible to asset locations, especially those in higher-risk areas. Furthermore, adaptations are helpful to align publicly available model data to utility-installed weather stations to allow for the most relevant and accurate forecasts of fire weather conditions. These new weather stations will provide more granular and asset-level data to support Xcel Energy's situational awareness and other enhanced wildfire risk mitigation measures.

The Company plans to deploy 2 weather stations in its South Dakota service territory in 2026. These weather stations will be installed on utility poles and feeders based on their risk area and impact on population and assets. The deployment strategy for these weather stations is being prioritized based on the Company's assessment of high wildfire risk and historical weather data. This is driven largely by areas with historically high wind speeds, as determined by the meteorological team.

The stations provide other wildfire mitigation benefits as well. They will help identify site extremes (maximum and minimums), and historical percentiles of observed variables based on the station history. This will allow the meteorology team to have the capability to view weather station data in a more precise manner to assess the fire danger relative to the baseline fire danger in a given location. This allows Xcel Energy to develop percentiles as one of its risk metrics. Additionally, Xcel Energy will have the ability to model short-term weather predictions at the newly installed weather stations in a custom user interface. Because of the erratic nature of wind, it is helpful to obtain real-time conditions in close proximity to our assets to monitor conditions in multiple wildfire scenarios, including validating weather forecasts and monitoring when the hazardous conditions have abated so we can work to end a PSPS, move out of EPSS, or safely begin working to restore power.

3. Subscription-Based Information Services

Xcel Energy will be using a variety of subscription-based information services in 2025 and 2026. These include Technosylva Fire Spread and FireSight software, as well as Synoptic, Sonoma Tech, and Metomatics, which are weather software. Synoptic provides weather station data to Xcel Energy from third-party networks. They collect and aggregate data from multiple networks, apply qualitative analysis and control to the data, and provide the data to us in a uniform format. Sonoma Tech provides Xcel Energy with their Pyrocast dataset, which is a highly accurate and detailed historical dataset containing information about fires. It contains sub-daily temporal resolution

which will be used to build our fire potential index (FPI). The FPI is a model that quantifies fire growth under certain weather/fuel/terrain conditions. It takes all of the complex information regarding wind gusts, RH, fuels, etc., and distills it down to a single number, that can inform operational decisions, like implementing EPSS or PSPS. Metomatics provides Xcel Energy with a 1km gridded unified historical weather data and weather forecast. This high spatial resolution should improve our forecast precision.

B. System Resilience

The Company also makes physical investments to directly reduce the risk of wildfire ignition to bolster system resilience, including the small conductor replacement, open wire replacement, non-expulsion upgrades, overhead pole assessment, and pole loading and clearance assessment.

1. Small Conductor Replacement Program

Small conductor replacement involves replacing small diameter (i.e., #4 American Wire Gauge[7] (AWG) or smaller) conductor with stronger, more durable conductors. The smaller conductors are used on some of the oldest lines in the Company's service territory and are smaller relative to what is now used for standard construction. Other system components (including poles, arms, braces, insulators, pins, and associated hardware) often need to be repaired or replaced to accommodate the larger wire, and those activities fall within the broader small conductor replacement program.

The Company will use larger bare conductor, covered conductor or some other solution. Unlike bare conductor (which have no insulating cover), covered conductors have an outside coating of cross-linked polyethylene which is ultraviolet resistant, non-tracking, fully voltage rated, and erosion resistant. Covered conductor is heavier than standard bare conductor of the same gauge and type and has a higher wind loading profile.

The benefit of replacing small conductor in terms of wildfire risk mitigation is that the larger, more durable conductor we are installing through the small conductor replacement program is physically more robust than small conductor, making it better able to withstand tree contact, other mechanical damage, and extreme weather and

[7] American Wire Gauge is the standard measure for the diameter of electrical conductors in the United States.

therefore less likely to result in ignition events or system defaults. The benefit of covered conductor in terms of wildfire risk mitigation is that covered conductor is less susceptible than bare conductor to ignition events associated with vegetation contact. It therefore is a useful mitigation, particularly in heavily forested areas. The Company will perform a study of each feeder to determine whether bare or covered conductor is more appropriate for a particular feeder.

The small conductor replacement program is the single largest category of planned investments the Company has for wildfire mitigation in South Dakota. Between 2026 and 2029, the Company is planning small conductor replacement involving 35 miles of distribution feeders.

2. Open Wire Replacement

Overhead, bare, open wire secondary conductor runs between wood poles. These spans can pose ignition risk due to vegetation contact, or due to failure initiated by pitting and/or wear of these smaller conductors. Open wire replacement involves replacing existing bare, open wire secondary conductor spans with insulated aerial cable lashed to the neutral conductor. The benefits of open wire replacement with respect to wildfire risk mitigation is that insulated conductor provides protection against contact with tree limbs. Replacement also allows the bare neutral conductor that the insulated conductor is lashed to provide a ground path so upstream protection can operate more quickly in the event the insulation becomes compromised.

Between 2026 and 2029, the Company is planning open wire replacement involving 35 miles of distribution feeders.

3. Non-Expulsion Upgrades

Non-expulsion upgrades are a form of system resiliency that involves replacing expulsion fuses, associated fuse cutouts, and lightening arresters on distribution poles with newer technology that does not emit hot material when operating. When a distribution feeder experiences a fault and an overcurrent occurs, fuses on the feeder are designed to open and isolate the fault, limiting further damage to other equipment. An expulsion fuse is designed to quench the arc, with material being expelled out of the fuse tube. The material being expelled can be hot and therefore presents an ignition risk when expelled in proximity to vegetation. Lightning arresters are devices installed to ground lightning surges. They direct the excess energy from a

lightning strike to ground, protecting pole top equipment such as transformers. Arresters can fail when lightning surge energy exceeds their capacity, or due to repeated operations. The end of life for an arrester is to fault to ground. When the fault happens, a built-in isolator fires and takes the arrester off-line by removing its connection to ground. This operation can expel hot material from the arrester, which can potentially ignite flammable matter or vegetation near the pole.

Between 2026 and 2029, the Company is planning non-expulsion upgrades in South Dakota involving 31 distribution feeders and the replacement of approximately 6,650 individual pieces of equipment.

4. Overhead Pole Assessment (OPA)

OPAs are assessments that are the primary method of performing above ground visual assessments for distribution assets. OPAs involve the use of unmanned aerial drones, flown by licensed pilots using a consistent procedure, to capture images of distribution structures and attachments from multiple angles. The imagery is then analyzed by Qualified Electrical Workers (QEW) or other individuals with significant electrical experience against a standardized defect matrix to identify and classify deficiencies that can impact public safety and/or reliability.

The Company will be using the images taken as part of or along with the OPA to gather detailed information regarding assets located in the field. The information gathered will include a detailed, global positioning system (GPS) coordinate for each pole, details regarding the conductor at the pole (*e.g.*, bare wire versus covered conductor, whether the primary conductor is copper or aluminum, if secondary conductor is lashed cable or open-wire), and types of fuses and lightning arresters on the poles. This will result in the Company having more granular information (including more accurate location information) regarding field assets, thereby improving our ability to operate and maintain the distribution system and determining where to implement wildfire mitigations.

OPAs are part of wildfire risk mitigation because they help identify defects on the distribution system that could result in reliability impacts and/or the potential for ignition if left unaddressed. Identified defects are categorized or ranked based on safety risk, risk to reliability, and ignition risk, and then addressed according to that prioritization. OPAs are directly related to reducing wildfire risk but also provide more general reliability benefits. As a result, the OPA and associated correction work will both mitigate wildfire risk and increase overall system reliability.

5. Pole Loading and Clearance PL&C Assessments

PL&C assessments identify the utilization of distribution structures and vertical clearance of supported overhead conductors to increase the Company's ability to identify and correct potential structural weaknesses before failure. Similar to OPA, the PL&C assessments identify structures with insufficient strength to withstand extreme wind criteria to be remediated in wildfire risk areas. PL&C assessments assist in ensuring that poles with insufficient strength are detected and remediated and consequently are less likely to lead to a wire down event. As with OPA, these assessments will also have broader system reliability benefits. By replacing structures that are not strong enough to withstand strong winds, the Company will also reduce the chances of those structures failing in non-wildfire extreme weather conditions.

The Company plans to begin these assessments in South Dakota beginning this year (2025) and continue them into the future. Currently, the Company anticipates assessing 20 percent and 5 percent of structures annually in Tier 2 areas for OPA and PL&C, respectively.

C. Operational Mitigations

Operational mitigation measures involve the Company making adjustments to how it operates its system in order to reduce the risk of wildfire ignitions. The Company is focusing on the Enhanced Powerline Safety Setting Program (EPSS) as its core operational mitigation approach. It refers to modifying settings in the relays and reclosers on the distribution system (both within the substation and outside the substation on the feeder) to create a wildfire-specific operating mode. When EPSS is activated, relays and reclosers are more sensitive to electrical faults and react faster to those faults (compared to normal settings in each such device). EPSS, when activated, also disables automatic reclosing in relays and reclosers that would reclose after tripping because of a fault.

A fault is an event occurring on an electric system such as a short circuit, a broken wire, or an intermittent connection. It may be caused by an object (such as a tree branch or another conductor) coming into contact with the conductor, by the conductor becoming displaced from its normal position (such as when the conductor breaks and falls onto the ground), or by a number of other causes. A fault creates a risk of wildfire ignition because it generally redirects power from its intended path and

may cause an electric arc. Any object having power redirected into it or that is exposed to an arc is likely to experience heating and may catch fire.

EPSS reduces the amount of time a fault persists, which reduces the time where an object could potentially experience heating and therefore, the chance of an ignition. This allows for powerlines to remain in-service during periods of elevated wildfire risk, but with protection settings that mitigate the wildfire risk.

There are four general categories of work associated with EPSS deployment. First, EPSS requires either: (1) work within the distribution substation, including modifying or replacing relays and, if needed, upgrading communications capabilities, or (2) deploying a recloser on the feeder as close as possible to where the feeder exits the substation or (in the case of an underground feeder exit) becomes overhead after exiting the substation. Second, reclosers may be deployed away from the distribution substation on the feeder itself. Third, the Company must perform a protection study, which identifies the specific settings that will allow the EPSS devices to operate in a coordinated manner. Finally, those settings need to be programed into the specific EPSS relays and recloser controls.

Between 2025 and 2029, the Company is planning to implement EPSS, involving upgrades on 31 feeders.

VI. CONCLUSION

The Company's investments in wildfire risk mitigation are needed to continue to provide safe and reliable service to our customers in South Dakota.