STATE OF ILLINOIS

ILLINOIS COMMERCE COMMISSION

Illinois Commerce Commission	:	
On Its Own Motion	:	
	:	**20-NOI-02**
Notice of Inquiry Regarding	:	
Electric and Natural Gas Service	:	
Safety and Reliability	:	

MIDAMERICAN ENERGY COMPANY'S RESPONSE TO NOTICE OF INQUIRY

Electric Service

A. *Please explain the processes you use to inspect your utility plant, equipment, and property in order to ensure that utility service is provided in a safe and/or reliable manner. Please include detail on the types and quantities of plant, equipment and property inspected, and how and how frequently such plant, equipment, and property is examined.*

Compliance Inspections are completed to ensure electric transmission, distribution, and substation facilities are in a safe and acceptable operating condition. Inspection personnel visually identify and record conditions which may cause equipment damage, service interruptions, be hazardous, or are not in compliance with applicable electrical safety code requirements. In all cases, if an emergency condition is identified, corrective actions are performed promptly.

Electric Transmission Facilities

MidAmerican conducts inspections on transmission facilities that are 69 kV and above in Illinois for compliance with the 2002 National Electrical Safety Code (NESC) Rule 232 as adopted in the Illinois Commerce Commission's rules for Construction of Electric Power and Communications Lines, 83 Ill. Adm. Code 305, as it relates to vertical clearances of wires, conductors, cables, and equipment above ground, roadway, rail or water surfaces. MidAmerican performs visual compliance inspections on all transmission facilities 69kV and above once per year, at minimum, which consists of aerial and ground patrols depending on circumstance. In addition to

the annual aerial and ground patrols, all transmission facilities have detailed ground inspections completed on a ten-year cycle.

To perform a transmission line inspection, inspection personnel are provided facility maps of the line section to be inspected, independent of the type of inspection to be completed. Inspection personnel visit each structure site associated with an identified transmission line section and document any noted potential issues. While following the inspection route, potential issues with conductors and static wires along with any issues that may exist in the right of way are documented. Electronic worksheets are created from the inspection notes detailing the findings.

While performing aerial or ground inspections, personnel identify broken or damaged facilities, potential reliability issues (trees, washouts, flashed insulators, etc.), damaged conductors, encroachments, and any other condition that may require immediate corrective action. Inspection personnel completing detailed ground inspections review metallic support structures, wood pole support structures, crossarms, equipment, hardware, insulators, guying, conductors, clearances, equipment, vegetation, grounding, riser terminations, and signage. The following table provides the total quantity of transmission facilities inspected:

Transmission Facilities		
	OH	UG
Switches	22	
Conductor (miles)	327	1.49
Wood Poles	3,001	
Steel Towers	181	
Steel Single Pole	313	
Total Transmission Structures	3,495	

In addition to the aerial, ground, and foot patrols, MidAmerican has historically performed below grade wood pole testing and treatments on approximately ten percent of wood transmission structures on an annual basis.

Distribution Facilities

MidAmerican conducts compliance inspections on all electric facilities 15 kV and below on a four-year cycle in Illinois for compliance with the 83 Ill. Adm. Code 305 as it relates to vertical clearances of wires, conductors, cables, and equipment above ground roadway, rail or water surfaces. To perform distribution inspections, personnel are given electronic data representing areas or zones that contain the facilities required to be inspected for the specified year of the four-year cycle. To ensure compliance, each overhead pole and underground structure is assigned a unique facility identification number. These identification numbers are used for routing inspection personnel who visit each pole or underground structure location in the zone and document potential issues. In addition to the pole and structure inspections, conductors (primary, secondary, and services), conductor clearances and other attachments are inspected both at the pole and to the next point of attachment. This continues until the zone inspection is complete.

Once documented, the issues identified are reviewed and categorized as MidAmerican, Customer, or Communication. Photographs of each discrepancy are taken as documentation for each item identified and are used to support categorization of the work and determination of necessary corrective action. Corrective action work orders are generated as necessary to instigate the appropriate operational requirements to remediate any potential deficiency pertaining to facilities owned by MidAmerican. For Customer and Communication inspection issues, deficiencies documented during the inspection process are communicated to the appropriate owner to ensure corrective actions are completed

While performing distribution compliance inspections, inspection personnel review overhead equipment including support structures (poles, crossarms, braces, etc.), hardware, insulators, guying, conductors (including clearances), switches, apparatus (transformers, reclosers, capacitors, surge arresters, etc.), vegetation, street lights, grounding (rods, connections molding, etc.), and clearances (vegetation, buildings, fences, other utilities, etc.). Inspection personnel also review underground equipment including transformers, primary enclosures, switchgear, secondary pedestals and vaults, locking devices, warning signs, exposed conductors, streetlights, and risers. The following table provides the total quantity of distribution facilities inspected:

Distribution Facilities			
	OH	UG	TOTAL
Switches	959	89	1,048
Arresters	2,661		2,661
Capacitors	249		249
Reclosers	49		49
Voltage regulators	105		105
Street lights	10,101		10,101
Poles	80,090		80,090
Sectionalizers	3		3
Towers	195		195
Transformers	23,369	5,129	28,498
Primary conductor (miles)	1,991	428	2,420
Secondary conductor (miles)	1,437	405	1,842
Manholes/vaults		203	203
Primary above grade enclosures		216	216
Primary below grade enclosures		28	28
Secondary above grade enclosures		1814	1814
Secondary below grade enclosures		579	579
Switchgear		43	43

In addition to the four-year cycle of detailed inspections, MidAmerican also has completed one complete cycle of below grade wood pole testing and treatments for all wood distribution poles in

Illinois over the past twelve-year period.

Substation Facilities

MidAmerican Energy Company has 40 electrical substations in Illinois that are inspected on a monthly interval.

B. *Please explain how many workers currently perform such inspections, the average time spent in the field by each worker examining equipment and facilities, an estimate of the amount of utility plant, equipment, and property inspected annually by each worker, the qualifications of the workers performing such inspections, how workers are trained, how workers training is update to include changes in requirements, and how the work performed by the workers is supervised.*

Transmission Facilities

Annually, there are two workers that complete transmission inspection work in Illinois. On average each inspector spends approximately 120 hours completing inspections. Workers are internal to MidAmerican and have a minimum of nine years of utility experience within transmission engineering and operations. Internal classroom training along with supervised field training is completed until resources are proficient. Inspectors receive additional training as warranted, or as reliability and safety codes, and regulatory requirements dictate.

Distribution Facilities

Annually, there are eight workers that complete distribution inspection work in Illinois. On average each inspector spends approximately 350 hours completing inspections. In addition to internal employees, MidAmerican uses contractors with varying qualifications based on individual industry experience brought to the position, but a minimum standard of six weeks of classroom instruction and two to four weeks of field supervision. Inspectors receive additional training as warranted, or as reliability and safety codes, and regulatory requirements dictate.

Substation Facilities

There are 20 employees that periodically perform the monthly substation inspections. Each of these employees are substation journeyman electricians or apprentices under the supervision of

journeyman electricians. On average, 2 hours are spent per substation performing these inspections. Inspections are completed on tablets and data automatically transferred back to our maintenance tracking software. Any changes to inspection process are communicated to the work group during weekly and or monthly safety/training meetings.

C. *Please explain whether your utility uses third parties to verify that inspections are performed timely and accurately and, if so, how such verifications are conducted.*

Transmission Facilities

MidAmerican does not use third parties to verify inspections are performed timely and accurately for transmission compliance inspections.

Distribution Facilities

All distribution inspections are completed during the calendar year associated with MidAmerican's four-year inspection plan. MidAmerican uses a combination of internal employees and contractors to verify inspections are completed timely and accurately. Third-party supervisors audit inspections completed by contractors. Audit results are incorporated into the zone inspection data prior to being submitted to MidAmerican. If issues are missed or improperly identified, third-party supervisors provide supplemental training.

Additionally, MidAmerican audits completed zone inspections. A MidAmerican employee reviews issues identified during the zone inspection, with visual inspections required for clearance issues, pole replacements, and issues not verified with supporting documentation. During the visual inspection, the employee reviews portions of the zone inspection and identifies, documents, and provides additional corrective actions found above and beyond those identified by the contractor. Items missed or improperly identified are brought to the contractor's attention for training purposes. After the visual inspection, the employee creates corrective action work orders.

Substation Facilities

MidAmerican Energy Company does not utilize third parties to verify substation inspections.

D. *Please explain whether your utility uses third parties to perform inspections and, if so, how your utility ensures that inspections are performed timely and accurately.*

Transmission Facilities

MidAmerican does not use third parties to complete transmission compliance inspections.

Distribution Facilities

All distribution compliance inspections are completed consistent with MidAmerican's four-year inspection cycle. MidAmerican uses a combination of internal employees and contractors to verify inspections are completed timely and accurately. As zone inspections are completed, supervisory contractors complete internal audits of their direct reports. Audit results are incorporated into the zone inspection data prior to submittal to MidAmerican. Contract supervisors provide training to contractors on issues missed or improperly identified.

Additionally, MidAmerican also audits completed zone inspections. A MidAmerican employee reviews issues identified during the zone inspection, with visual inspections required for clearance issues, pole replacements, and issues not verified with supporting documentation. During the visual inspection, the employee reviews portions of the zone inspection and identifies, documents, and provides additional corrective actions found above and beyond those identified by the contractor. Items missed or improperly identified are brought to the contractor's attention for training purposes. After the visual inspection, the employee creates corrective action work orders.

Substation Facilities

MidAmerican Energy Company does not utilize third parties to perform substation inspections.

E. Please explain how issues identified through inspections are addressed including how issues are prioritized and how potentially systematic issues are addressed.

Transmission Facilities

Issues that are identified as an immediate potential safety hazard or reliability issue that may cause an outage are immediately documented and called into MidAmerican's system control center to address. All other issues are addressed within six to twelve months of identification.

Distribution Facilities

Issues that are identified as an immediate potential safety hazard or reliability issue that may cause an outage are immediately documented and called into MidAmerican's system control center to remediate. All other issues are documented during the inspection process with corrective actions completed in the field the following calendar year. Systematic issues are addressed by third party supervisory personnel or by MidAmerican personnel communicating to the third party vendor of the issue(s) identified.

Substation Facilities

Substation issues identified during the inspection process are identified on the electronic form requiring the user to enter a comment/reason to allow completion of the inspection. These comments are summarized in a report for the department engineer to review. Follow-up can consist of creating work management orders for crew maintenance/repair, hiring contractors to make repairs (ex: HVAC, fences, weed spraying, etc), or continue to monitor noted issue. Prioritizing maintenance items is completed during departmental staff meetings.

F. Please explain whether your utility provides safety awareness training or education to contractors and/or the public and, if so, please explain how this training or education is conducted.

MidAmerican Energy provides public safety training in regards to Electric and Natural Gas

Transmission and Distribution to emergency and first responder organizations via in person presentation upon request. These informational meetings have been temporarily suspended since March 2019 due to the restrictions in place as a result of the COVID-19 pandemic and response. Recently, to address such a concern, the training presentation has been converted into a video graphic presentation that can be sent electronically to requesting organizations. This product is in the final editing stages and is scheduled to be completed and made available by the end of this year.

G. *Please explain what processes you have in place to permit the public to report utility plant, equipment, and property that may pose a safety risk to the public, what formats are uses (e.g., phone calls, text messages, e-mails, website reports, etc.) what information is accepted through these processes (e.g., written reports, verbal reports, photographs, etc.) and the processes and procedures you have in place.*

Customers may call to report a safety concern of any type by calling the number on their bill or on our website. They may also send an email to customer service or use the web to fill out a feedback form. Once the report is received, and depending on the safety concern, the employee receiving the report will call facilities, local leadership, or place an electric emergency order for immediate response. All reports of a potential safety concern are acted upon immediately, regardless of the method of communication, time of day, location or severity of the potential safety hazard.

Natural Gas Service

A. *Please explain the processes you use to inspect your utility plant, equipment, and property in order to ensure that utility service is provided in a safe and/or reliable manner. Please include detail on the types and quantities of plant, equipment and property inspected, and how and how frequently such plant, equipment, and property is examined.*

MidAmerican owns and operates approximately 1160 miles of natural gas distribution main, 60,600 service lines, and 60 miles of transmission line in Illinois. To maintain the safety and reliability of gas service, MidAmerican performs over 7,300 tests and inspections annually to evaluate the system and promote safe operation. The Company manages its periodic tests and

inspections using an in-house Delivery Compliance database and scheduling engine to ensure inspections at least as frequent as required by applicable regulations. Maps of facilities to be inspected are generated from our GIS system. Cathodic protection, odorization, pressure regulation and valve inspections are performed by company personnel; while leak survey, atmospheric corrosion inspection and gas system patrols are generally performed by contract personnel. At this time atmospheric corrosion inspections are performed on foot simultaneous with leak survey and system patrolling. Test equipment (*e.g.,* pressure gauges and gas detectors, etc.) is inspected and calibrated by company personnel, sent offsite for vendor calibration, or replaced as necessary. For the various inspections performed by MidAmerican for natural gas service, frequency of inspection hours required, and personnel required to perform these tasks, please refer to Attachment A.

B. *Please explain how many workers currently perform such inspections, the average time spent in the field by each worker examining equipment and facilities, an estimate of the amount of utility plant, equipment, and property inspected annually by each worker, the qualifications of the workers performing such inspections, how workers are trained, how workers training is update to include changes in requirements, and how the work performed by the workers is supervised.*

For the number of workers currently performing natural gas service inspections, the average time spent in the field by each worker examining equipment and facilities, an estimate of the amount of utility plant, equipment, and property inspected annually by each worker, please refer to Attachment A. Personnel performing inspections are operator qualified for the specific tasks they perform under MidAmerican's Operator Qualification plan and evaluated using a combination of written and performance evaluations as required by the plan. Changes to procedures or requirements are communicated electronically or by printed Mandatory Notice for review by contract and company personnel. MidAmerican's Learning Management System is used to track distribution, receipt, and completion of Mandatory Notice training.

C. *Please explain whether your utility uses third parties to verify that inspections are performed timely and accurately and, if so, how such verifications are conducted.*

MidAmerican does not use third parties to verify whether inspections are performed timely and accurately.

D. Please explain whether your utility uses third parties to perform inspections and, if so, how your utility ensures that inspections are performed timely and accurately.

MidAmerican utilizes contract employees to perform leak surveys and gas system patrols. Surveys and patrols are managed using an in-house database and scheduling engine to ensure timely completion. Survey results are recorded using handheld devices in the field and submitted electronically submitted to an in-house Delivery Document Center where data is reviewed by supervisors for completeness and accuracy. Once approved by the supervisor, records are housed and schedules updated electronically.

As part of MidAmerican's continuous monitoring, the Compliance department conducts periodic internal audits of area records and field to identify deficiencies and identify areas of improvement. The Compliance department prepares a monthly compliance report that includes items identified during internal audits, as well as key regulatory and company standard deadlines. This report is reviewed by Management and monitored closely by the Compliance department to ensure deadlines are met.

E. Please explain how issues identified through inspections are addressed including how issues are prioritized and how potentially systematic issues are addressed.

Deficiencies identified during inspections are reported electronically from handheld devices and tracked in a central compliance tracking database. Each deficiency is assigned a standard remediation timeframe by the tracking system to ensure consistency and timely remediation.

F. Please explain whether your utility provides safety awareness training or education to contractors and/or the public and, if so, please explain how this training or education is conducted.

MidAmerican provides safety awareness training to the public and contractors through its

Public Awareness Program, which is designed to establish communications and provide information necessary to help the public understand the use of pipelines, how pipelines function, and the public's responsibilities to help prevent damage to pipelines. MidAmerican works with Paradigm, a contractor with extensive experience implementing Public Awareness Programs for natural gas local distribution companies. Paradigm offers its Coordinated Response Exercise ("CORE") training in-person in MidAmerican's Illinois service territory which educates attendees on the specific attributes of MidAmerican's pipeline system and its potential hazards, how to safely respond to pipeline emergencies, an overview of how to prevent pipeline accidents and mitigating consequences if they do occur, and how to contact MidAmerican in the event of an emergency or for additional information. MidAmerican staff is present at all CORE trainings to answer additional questions posed by the public.

In addition to in-person training MidAmerican employs other mediums to convey its safety message to the public. Radio and digital gas safety messages, with Company contact information, are sent out each spring and fall. Contractors identified by Standard Industrial Classification codes are selected to receive MidAmerican's gas and electric safety brochure that is sent out every spring (see Attachment B). As part of the Public Awareness Program, every four years, MidAmerican utilizes a phone survey to gauge the knowledge and understanding of these safety messages and adjusts the program based upon those results. When company or contract damage prevention specialists are working with excavation contractors, the contractors are offered damage prevention training sessions at no expense. These sessions focus on the best practices of calling in locates, the tolerance zone, potholing and directional drilling.

G. *Please explain what processes you have in place to permit the public to report utility plant, equipment, and property that may pose a safety risk to the public, what formats are uses (e.g., phone calls, text messages, e-mails, website reports, etc.) what information is accepted through these processes (e.g., written reports, verbal reports, photographs, etc.) and the processes and procedures you have in place to act upon such reports.*

Customers may call to report a safety concern of any type by calling the number on their bill or on our website. They may also send an email to customer service or use the web to fill out a feedback form. Once the report is received, and depending on the safety concern, the employee receiving the report will call facilities, local leadership, or place a gas emergency order for immediate response. All reports of a potential safety concern are acted upon immediately, regardless of the method of communication, time of day, location, or severity of the potential safety hazard.

Dated: September 15, 2020

Respectfully submitted,

MIDAMERICAN ENERGY COMPANY

By: *__/s/ Arick R. Sears_____*

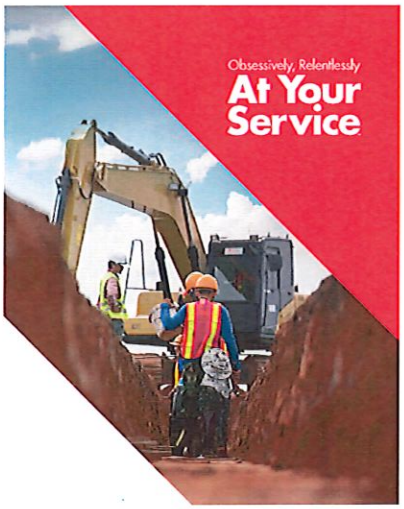
Arick R. Sears
Senior Regulatory Attorney
MidAmerican Energy Company
666 Grand Avenue, Suite 500
Des Moines, Iowa 50309
Telephone: (515) 281-2782
Email: arick.sears@midamerican.com

Attachment A – MidAmerican Energy Company's Inspection Detail

Inspection Type	Quantity to test	Minimum Frequency	Duration/Inspection (each)	Aggregate Hours/Year	Task(s) performed include but are not limited to	Number of Personnel
Test Equipment	300	Varies from monthly to annually	1 hour (hr)	300	Verify/calibrate tools and equipment	2
Casing	420	Annually	0.5 hr	210	Perform Cathodic Isolation Test	6
Cathodic Isolated Segment Reads	687	At least once every ten years	0.5 hr	40	Check cathodic protection on 10% of iso segments in each jurisdiction	1
Cathodic Test Point Reads	3280	Annually	0.25 hr	820	Check cathodic protection on all cathodic protection zones	6
CP Bond Reads	2	Six times/year	1 hr	12	Check CP bonds	1
Rectifier Inspections	2	Six times/year	2 hr	24	Verify rectifier functionality	1
Supplier Isolation Tests	10	Annually	1 hr	10	Verify cathodic protection isolation from supplier facilities	1
Essential Valves	1054	Annually	0.5 hr	527	Verify valve operability	10
Odorizer inspections	10	Annually	2 hr	240	Check odorant levels and adjust odorizers as necessary	10
Regulator Station Inspections	218	Annually	1.5 hr	327	Check regulator set points, verify overpressure protection, verify essential valve operability, check locks, coating condition, supports, signage, etc.	10
Town Border Stations	10	Annually	2 hr	20	Check regulator set points, verify overpressure protection, verify essential valve operability, check locks, coating condition, supports, signage, etc.	10
Transmission Farm Tap	19	Once every 3 years	1.5 hr	10.5	Check regulator set points, verify overpressure protection, verify essential valve operability, check locks, coating condition, supports, signage, etc.	10
Odor Level Test	11 locations	Monthly	1 hr	130	Perform tests to verify odorant is sufficient for persons with a 'normal' sense of smell	22
MAOP Annual Review	178	Annually	0.5 hr	85	Review MAOP Systems for changes that could affect system MAOP	3
Fuel Piping Surveys	87 locations	Once every 3 years	0.5 hr	15	Leak survey customer owned pipe per Illinois requirement	3
Leak Survey - Business District	134 miles	Annually	4 hr/mi	520		3
Leak Survey - Trans Class ½	63 miles	Annually	2 hr/mi	126	Walking leak survey includes system patrol requirements and atmospheric corrosion inspection	6
Leak Survey - Trans Class 3	15 miles	Two times/year	2 hr/mi	60		3-contractors 3-company

Inspection Type	Quantity to test	Minimum Frequency	Duration/Inspection (each)	Aggregate Hours/Year	Task(s) performed include but are not limited to	Number of Personnel
Leak Survey (3 YR)	1017 miles	Once every 3 years	4 hr/mi	1356		3-contractors 3-company
Site Patrol Annual	168	Annually	0.5 hr	83		3-contractors 3-company
Site Patrol Semi-annual	156	Two times/year	0.5 hr	156	Site specific patrols to check locations where gas facilities cross highways, bridges, railroads,	3-contractors 3-company
Site Patrol Quarterly	22	Four times/year	0.5 hr	44		3-contractors 3-company
Public Building Inspections	350 inspections	Annually	0.5 hr	175	Leak survey of public buildings including visual inspection of gas facilities where applicable	3-contractors 3-company

Attachment B



IMPORTANT INFORMATION
FOR CONTRACTORS

Tips to help keep you, your crew and the public safe when working around electricity and natural gas

MIDAMERICAN ENERGY COMPANY.

CALL BEFORE YOU DIG. IT'S THE LAW.

Before you begin digging or blasting for any reason, you must dial 811 or submit a web ticket online at call811.com. Call at least two full working days before digging to locate underground gas, electric and other underground utilities.

Our representatives will mark MidAmerican Energy-owned underground gas and electric facilities and other underground utilities at no cost.

Preserve location marks and flags until the project is complete to avoid potential injury that may result if contact is made with an underground line.

HOW TO REPORT A GAS LEAK OR DAMAGED LINE

Call 911 and MidAmerican Energy at the number below to report a gas leak or damaged line!

800-595-LEAK (800-595-5325)

MidAmericanEnergy.com

811 Know what's below. Call before you dig.

MIDAMERICAN ENERGY COMPANY.

EXCAVATOR SAFETY TIPS

Underground utilities transport energy products, including natural gas and electricity. Dig safely around underground utilities to keep yourself, your team and the public safe and free from service disruption.

When someone hits underground utility lines — known as dig-ins — the damage can be disastrous. Hit lines can risk lives and disrupt service to customers. When utility lines are hit, the damage can also cost contractors and utility owners millions of dollars in repairs and service disruptions each year.

Workers who contact buried utilities put themselves and others at risk of injury or death. Don't risk it. It's your responsibility to dig safely and to protect yourself, your crew and the public.

To avoid dig-ins, follow these tips:

TIP CALL BEFORE YOU DIG. IT'S THE LAW.

Call 811 at least two full working days before you begin digging.

811 accepts locate requests 24 hours a day, 365 days a year. If you plan to dig during a weekend or holiday, allow even more time for utilities to be located.

After you call 811, utilities will be marked. MidAmerican Energy locators will mark MidAmerican Energy-owned underground natural gas and/or electrical lines at no cost. For customer-owned utilities, including pipes or wires that transport natural gas or electricity beyond a MidAmerican Energy-owned meter, contact a qualified private contractor. To find a contractor, go to www.usclic.com and select Private Utility Request.

- While line your proposed excavation route, so locators can easily mark affected utilities.

TIP RESPECT THE TOLERANCE ZONE

The tolerance zone denotes where a line or facility is located, and special care is to be taken. Dig carefully by hand when working in this area. Removing supporting soil in the tolerance zone can cause damage to underground gas lines. Observe the tolerance zone to avoid damage to yourself or others and underground utilities.

Flags or marks identify the location of underground utilities, but not how deeply they are buried. Before you can safely cross or work near an underground natural gas line, you must first verify its depth.

- If you must work in a tolerance zone, don't use power-digging equipment. Note: Tolerance zones vary by state. Visit www.call811.com to learn more.

TIP COMMIT TO SAFETY

You're responsible for protecting and preserving utility locate markings, flags, and/or other designations until they are no longer required for proper and safe excavation work at or near underground utility lines.

MidAmerican Energy is committed to your safety and the safety of others. By law, MidAmerican Energy will have a representative present when excavation activities occur within 25 feet of a natural gas transmission line, so call 811 at least two full working days before digging.

We encourage using steel bars over backhoe bucket teeth when excavating near transmission pipelines. This helps prevent damage to a natural gas line.

IF DAMAGE TO AN UNDERGROUND UTILITY OCCURS, CALL 911 AND MIDAMERICAN ENERGY AT 800-595-5325 IMMEDIATELY.

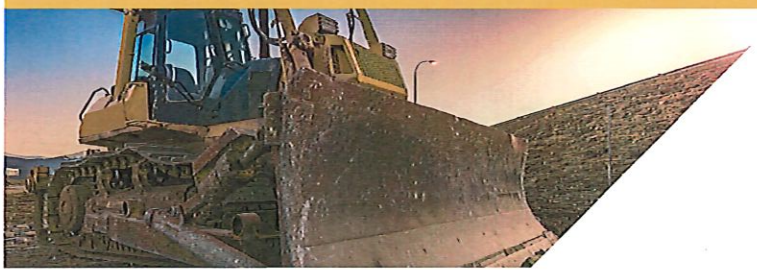
Never bury a damaged natural gas line, and don't try to fix the damage yourself. If you are unsure who owns the gas line, call 811.

TIP UNDERSTAND AND PRESERVE UTILITY LOCATION MARKINGS

Train your team to understand utility locate markings. MidAmerican Energy uses paint, flags, or other materials to mark underground utilities according to the Uniform Color Code of the American Public Works Association.

COLOR CODE
FOR MARKING UNDERGROUND UTILITY LINES

- ELECTRIC
- GAS-OIL-STEAM
- COMMUNICATION CATV
- POTABLE WATER
- IRRIGATION, RECLAIMED WATER, SLURRY LINES
- SEWER
- TEMPORARY SURVEY MARKINGS
- PROPOSED EXCAVATION



KNOW YOUR RESPONSIBILITY
AS AN EXCAVATOR

MidAmerican Energy values your safety as a contractor or excavator, and the safety of our customers. That's why we're providing this brochure to inform you of important safety measures when working around gas, electric and other underground utilities. Share this information with others on your construction crew, too.

COMMUNICATE THE IMPORTANCE OF SAFETY

- Regular safety meetings remind workers about safety practices that can prevent accidents.
- Share the information in this brochure at your next safety meeting and on the job site.
- Take safety seriously every day. To learn more, visit our website: www.MEC.safezonesite.com.

DETECTING NATURAL GAS USING YOUR SENSES

SMELL

Natural gas doesn't have an odor. MidAmerican Energy adds an odorant, called mercaptan — that smells like rotting eggs or a skunk smell — to our natural gas to help you detect a leak.

SIGHT

Natural gas may blow dirt, make bubbles, kill vegetation, or create an area of frost on the ground in warm weather when it leaks from an underground pipe.

SOUND

A natural gas leak can be a quiet hiss or a loud roar.

3 STEPS TO TAKE
IF YOU SMELL, SEE OR HEAR NATURAL GAS

1. Do not attempt to locate the leak. Leave the area immediately and do not touch anything that could cause a spark.
2. Call 911 and MidAmerican Energy at 800-595-5325 from another location at a safe distance. MidAmerican Energy will investigate the situation at no cost.
3. Do not re-enter the area until you have been advised that it is safe.

4 TIPS TO KEEP YOU SAFE

WHEN WORKING AROUND ELECTRICITY AND NATURAL GAS.

1 LOOK UP.

WATCH FOR OVERHEAD POWER LINES.

Accidental contact with an overhead power line, either with your body or indirectly through a ladder or tool, can result in serious injury or death.

Never get within 20 feet of an overhead power line. Make sure power lines are de-energized when work is performed on or near them. Use a lockout/tagout procedure to make sure lines remain de-energized. Inspect repair work before re-energizing equipment. Know the locations of all overhead power lines at the job site before operating or working with equipment. Keep vehicles and heavy machinery safely away from overhead power lines.

- Don't use cage-type boom guards, insulating links or proximity warning devices as a substitute for de-energizing and grounding lines or maintaining safe clearance.
- Use only nonconductive equipment and tools near energized overhead power lines.
- Inspect tools and equipment before use, and properly maintain them.
- Operate cranes at a lower-than-normal rate in the vicinity of power lines.
- Avoid storing equipment and materials under or near overhead power lines.

2 LOOK DOWN.

CALL BEFORE YOU DIG. IT'S THE LAW.

- Before digging for any reason, you must dial 811 or submit a web ticket online at call811.com. Call at least two full working days before digging to locate underground gas, electric and other underground utilities.
- Preserve location marks and flags until the project is complete to avoid potential injury that may result if contact is made with an underground line.
- If you must exit any equipment because of fire or other safety reasons, jump completely clear of the machine.

811® Know what's **below.** **Call** before you dig.

3 LOOK AROUND.

ALWAYS USE A SPOTTER.

- Designate another worker to observe the clearance between equipment and an overhead power line or an underground utility line, because it may be difficult for machine operators to see every potential hazard.
- Train a spotter to quickly warn others if the minimum distance between electrical power and underground utility lines is not maintained.
- Focus on safety. This should be the only job the spotter is performing when hazardous conditions are present.
- Use a spotter when moving or erecting ladders, scaffolding and other construction equipment near overhead power lines.
- Keep all personnel away from cranes operating close to power lines.

4 LOOK OFTEN.

DON'T LET YOUR EQUIPMENT CONTACT A POWER LINE.

- If a machine comes in contact with a power line, always assume the line is energized.
- Don't allow anyone to come near or touch the machine.
- Stay away from the machine, and get help.
- Avoid electrical shock. When jumping clear of the machine, land with both feet together. Don't walk or run. Instead, shuffle away in small steps, with both feet in contact with the ground, to help minimize the path for electric current and to maintain your balance.
- Don't touch the equipment and the ground at the same time.
- Use appropriate personal protective equipment for the job. Inspect PPE before each use, and test it as required.

MidAmericanEnergy.com

MIDAMERICAN ENERGY COMPANY.