

**BEFORE THE SOUTH DAKOTA PUBLIC UTILITIES COMMISSION
OF THE STATE OF SOUTH DAKOTA**

IN RE: IN THE MATTER OF THE APPLICATION OF MIDAMERICAN ENERGY COMPANY FOR AUTHORITY TO INCREASE NATURAL GAS RATES	DOCKET NO. NG26-__
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**DIRECT TESTIMONY
OF
MARK A. HOOGWERF**

I. WITNESS INFORMATION

2 **Q. Please state your name and business address.**

3 A. My name is Mark A. Hoogwerf. My business address for MidAmerican Energy
4 Company (“MidAmerican” or “Company”) is 1200 South Blauvelt Avenue,
5 Sioux Falls, South Dakota 57105.

6 **Q. By whom are you employed and in what capacity?**

7 A. I am employed by MidAmerican as the Director, Gas Engineering.

8 **Q. Please describe the responsibilities of your current position.**

9 A. As Director, Gas Engineering, I oversee the planning, design and management of
10 projects on MidAmerican’s natural gas systems in a regulatory-compliant
11 manner. This includes planning and implementing solutions to customer-
12 requested modifications in accordance with MidAmerican’s tariffs, addressing
13 safety or regulatory compliance concerns, and working with government entities
14 to place, adjust and operate our pipelines safely in accordance with local
15 franchise agreements.

16 **Q. Please describe your educational background and business experience.**

17 A. I graduated from Dordt College in 2001 with a Bachelor of Science in
18 Engineering with a mechanical emphasis. In 2008, I earned a Master of Science
19 in Mechanical Engineering from Georgia Institute of Technology. I am currently
20 certified in the state of South Dakota and five other states as a licensed
21 professional engineer in the field of mechanical engineering. In 2001, I began my
22 career in the utility industry at Florida Power and Light Company where I served
23 in a variety of electric distribution engineering and planning positions in Fort

1 Myers and Sarasota, Florida. In 2008, I returned to the Midwest and worked as a
2 substation engineer and manager at Northwestern Energy in Huron, South
3 Dakota. I joined MidAmerican in January of 2013 as a Supervisor, Gas
4 Distribution Engineering and held that position until I became Manager, Gas
5 Engineering in March 2022. In February 2024, I became Director, Gas
6 Engineering and currently hold this position.

7 **Q. Have you testified previously before the South Dakota Public Utilities**
8 **Commission?**

9 A. No.

10 **II. PURPOSE OF DIRECT TESTIMONY**

11 **Q. What is the purpose of your direct testimony?**

12 **A.** The purpose of my testimony is to explain MidAmerican's historical and planned
13 capital expenditures, including:

- 14 • The necessity and reasonableness of MidAmerican's planned capital
15 investments; and
- 16 • The nature and purpose of MidAmerican's major gas infrastructure projects.

17 **Q. In addition to your testimony, are you sponsoring any exhibits?**

18 A. No.

1 **III. CAPITAL PROJECTS**

2 **A. Capital Investment**

3 **Q. What are some of the primary drivers of MidAmerican's capital investments**
4 **in the natural gas system?**

5 A. We invest in capital improvements to meet the needs of new growth, facilitate
6 government relocation projects, and maintain compliance with regulatory
7 requirements to ensure the safe and reliable operation of the natural gas system.

8 **Q. How does MidAmerican address these drivers while ensuring that the**
9 **capital projects are financially responsible and reasonable from a customer**
10 **and rate perspective?**

11 A. We address these drivers by balancing reliability, safety and compliance needs
12 against the potential cost impact for each investment. We consider the operational
13 need, safety and compliance requirements, timing constraints, and the overall
14 cost of the investment. Non-discretionary projects such as new business,
15 government relocations and regulatory compliance work are completed as
16 required to meet customer, governmental or regulatory obligations. Where
17 discretion exists, we prioritize and schedule projects based on system condition,
18 operational risk and cost to deliver reliability, safety and compliance benefits at
19 a reasonable cost. In sum, we evaluate capital projects in a manner consistent
20 with industry standards and regulatory expectations for prudent utility investment
21 to ensure that the projects completed are both financially responsible and
22 reasonable from a customer and rate impact perspective.

1 **Q. What steps does MidAmerican take to complete capital projects in a cost-**
2 **effective manner?**

3 A. We procure materials and services through competitive bidding processes
4 designed to ensure compliance with Company specifications at the lowest
5 evaluated cost. Whenever feasible, MidAmerican utilizes internal labor to
6 minimize reliance on external contractors. When contractor resources are
7 required, competitive bidding processes ensure projects are completed cost-
8 effectively.

9 **Q. Have construction and material cost trends affected the cost of completing**
10 **gas capital projects over time?**

11 A. Yes. Although MidAmerican manages costs through competitive procurement
12 and efficient use of internal labor and qualified contractors, the cost of
13 constructing and replacing natural gas infrastructure has increased over time due
14 to inflationary pressures on labor and materials and evolving compliance
15 requirements. These trends increase the cost of completing routine system
16 investments compared to prior periods.

17 **B. Capital Projects – Types**

18 **Q. What types of capital projects does MidAmerican invest in?**

19 A. When planning gas delivery capital expenditures, the work can generally be
20 organized into four major categories:

- 21 (1) New Business
22 (2) Government Relocation
23 (3) Compliance and Integrity Management

1 (4) System Reliability

2 Many of the capital investments described in my testimony—particularly
3 compliance and integrity management projects, system reliability projects, and
4 government relocation projects—are required to maintain safe and reliable
5 service and to comply with applicable regulatory, safety, and franchise
6 requirements. These investments are not primarily driven by new customer
7 growth and generally do not produce incremental base-rate revenues.

8 **Q. What constitutes a new business project?**

9 A. New business projects represent the capital improvements required to provide
10 service to new or expanded customers. This includes extensions to and within
11 new subdivisions or developments and individual services to the new customers.
12 This is the work that would typically be referred to as revenue producing and is
13 governed by the Expansion of Gas Distribution System portion of the tariff.

14 **Q. What are Government Relocation projects?**

15 A. Government Relocation projects represent the work required to accommodate
16 modifications or changes to the existing state and municipal infrastructure
17 included in the road right of way. This includes but is not limited to changes to
18 the road surface, layout, elevations and locations, as well as subgrade facilities
19 such as water lines, sanitary sewers, storm sewers, sump collector systems, or
20 other facilities owned or operated by the local or state governing body.
21 Government relocation projects are not discretionary to MidAmerican and are
22 required to accommodate public infrastructure projects and to comply with
23 applicable franchise agreements and governmental requirements. When

1 relocation is necessary to accommodate the scope or schedule of a public project,
2 MidAmerican must perform the relocation work. When a city, county, or the
3 South Dakota Department of Transportation (“DOT”) proposes changes to the
4 roadway, or their associated water, sewer or storm sewer infrastructure,
5 MidAmerican staff review the proposed government infrastructure plans to
6 determine if there are any conflicts with the existing MidAmerican facilities and
7 seek to work with the engineering firms for the governing authority associated
8 with the project to minimize any conflicts in the field. When possible, some
9 proposed conflicts can be addressed with minor changes to the design of the
10 roadway infrastructure. However, in many cases, we must relocate our existing
11 facilities to accommodate the changes within the right-of-way and adhere to
12 franchise agreements and the South Dakota utility accommodation regulations.
13 The project schedule and scope are driven by the governing authority, and not
14 MidAmerican, which means we must complete the relocation of the facilities in
15 conflict under the roadway improvement schedule.

16 **Q. What are Compliance and Integrity Management Projects?**

17 A. Compliance and integrity management projects are constructed to maintain
18 compliance with regulatory requirements or reduce risk to MidAmerican’s gas
19 distribution and transmission systems in accordance with our integrity
20 management programs. These system reliability investments support safe and
21 reliable service while minimizing long-term costs by proactively addressing
22 system risks rather than waiting until more costly emergency repairs are
23 necessary.

1 **Q. How are compliance and integrity management projects determined?**

2 A. MidAmerican's integrity management team evaluates numerous risk criteria
3 including leak and corrosion history, age, cathodic protection status, and material
4 considerations to prioritize replacement work. This work is then evaluated by
5 operations and engineering teams to determine which projects can be safely and
6 cost-effectively completed each year.

7 **Q. How are System Reliability Projects determined?**

8 A. We analyze the existing distribution system to determine if there are any system
9 pressure or operating deficiencies prior to each winter heating season to ensure
10 reliable service to our customers. When low pressures are forecasted, the system
11 is typically analyzed for future years to determine if any projected changes to the
12 system over time are expected to amplify the strain on the system, or if the
13 pressures appear to be stable into the future. We then prioritize projects based on
14 how quickly we expect the reliability of the line to decrease if we do not complete
15 improvement projects. System reliability projects help reduce the likelihood of
16 service interruptions and improve the resilience of the distribution system during
17 periods of peak demand and extreme conditions by addressing identified system
18 constraints and providing alternate feed paths where feasible.

19 **Q. Are pressure concerns the only driver for System Reliability Projects?**

20 A. No. In addition to pressure support, some projects also provide a two-way feed
21 to areas currently served by a single radial feed. This helps improve service
22 reliability by providing an alternate path to provide service continuity if a portion
23 of the original radial feed were to fail. We also consider things like gas

1 temperature and equipment operability during harsh conditions when prioritizing
2 projects to maintain continuous service to customers when it is most needed.

3 **Q. Are these four categories the only types of capital investments completed by**
4 **MidAmerican?**

5 A. No. In the course of operating the natural gas system, MidAmerican must
6 complete capital work associated with facility failures and emergency repairs,
7 address identified safety concerns, and provide the appropriate tools and
8 equipment to allow MidAmerican personnel to safely operate the gas delivery
9 system.

10 **C. Capital Projects - Planning**

11 **Q. How does MidAmerican plan for new business projects?**

12 A. New business projects are completed to meet the needs of new and expanding
13 customers and are planned to meet the growth needs across the service territory.
14 Most new business projects are planned and completed in what are referred to as
15 blanket projects. These projects represent work that is high volume and low cost,
16 such as individual services to new customers or main extensions to reach new
17 customers or subdivisions. These projects are not specifically budgeted per
18 project, because this work is completed in response to customer requests and
19 typically has a construction timeline of less than one year from the initial request
20 to the date gas service is required. Instead, blanket projects are budgeted based
21 on historical data and trends. Budgeting these projects on a blanket basis allows
22 MidAmerican to respond efficiently to customer demand while maintaining
23 reasonable cost controls based on historical experience. When very large new

1 business projects that may require extensive upgrades and permitting are
2 identified, they are planned as individual projects.

3 **Q. How does MidAmerican plan and budget government relocation projects?**

4 A. Government projects are planned and budgeted utilizing primarily two methods.
5 First, individual relocations that are significant and known in advance are
6 planned and budgeted as discrete projects. Second, the balance of relocation work
7 is budgeted based on historical costs associated with government relocation
8 activities.

9 **Q. What dictates which method is used?**

10 A. MidAmerican maintains regular communication with the communities we serve
11 to determine which road reconstruction projects will be completed each year. In
12 some instances, the city, county, or the DOT project design is completed to the
13 extent that the known conflicts can be identified during the budget cycle. When
14 that happens, we can budget the relocation as an individual project. However, in
15 many cases, the road reconstruction plans are either unknown or in various stages
16 of development during the budget cycle. In those circumstances, the project costs
17 are planned and budgeted based on historical actual costs and known government
18 activity, much like smaller new construction projects. In either event,
19 MidAmerican staff endeavor to work with the roadway engineers to determine
20 solutions that will minimize the amount of relocation work required, but the
21 relocation must be completed in a manner that will facilitate the timely
22 completion of the governing body's reconstruction project.

1 **Q. How did you determine which compliance and integrity management**
2 **projects to complete and the timeline on which to complete them?**

3 A. These projects reflect those that must be completed within appropriate
4 compliance remediation periods, or projects that were identified by the integrity
5 management analysis as the highest priority projects that can be feasibly
6 completed within the time period.

7 **Q. How did you determine which system reliability projects to complete and the**
8 **timeline on which to complete them?**

9 A. The system reliability projects included in the set of planned projects reflect the
10 projects proposed as a part of the ongoing system analysis that identify overall
11 system needs. The proposed system reliability work is re-prioritized prior to the
12 construction season to validate the inputs used in the system analysis with the
13 most recent data, and account for any additional changes that may have occurred
14 since the initial budget prioritization. MidAmerican has pressure design criteria
15 to ensure that the system will operate as designed. MidAmerican designs its
16 distribution systems such that all equipment will work as designed at a pressure
17 as low as one-half of the maximum allowable pressure for that operating system.
18 If a system is expected to drop below this pressure, a project is identified and
19 prioritized for completion. Projects with more substantial pressure deviations or
20 more dynamic changes are prioritized above those of more stable systems with
21 pressures very near the design minimum pressure.

1 **Q. Please describe the analysis MidAmerican undertook to determine which**
2 **capital projects were included in the pro forma adjustments.**

3 A. MidAmerican included all applicable non-revenue generating projects that meet
4 the required pro forma qualifications planned for completion during the allowed
5 pro forma period ending on December 31, 2027.

6 **Q. How did MidAmerican determine which government relocation projects to**
7 **include in the pro forma adjustments?**

8 A. Because the schedule for the government relocation work is dependent on the
9 schedule for the government infrastructure improvements, the projects included
10 in the pro forma adjustments are those which are known to require action within
11 the pro-forma period. There are many other government relocation projects that
12 will occur during the pro-forma period, however due to the scheduling
13 uncertainty associated with local government jurisdiction reconstruction
14 priorities, most government relocation projects were not included in the
15 adjustments.

16 **Q. How did you determine which system reliability projects to include in the**
17 **pro forma adjustments?**

18 A. The system reliability projects included in the pro forma adjustments reflect the
19 projects identified through ongoing system analyses and sound engineering
20 judgement that were planned to be placed into service during the pro-forma
21 period. The identified system reliability projects are prioritized and scheduled
22 based on severity of need and other constructability factors such as easement and
23 right-of-way availability.

1 **Q. How did MidAmerican determine which integrity management projects**
2 **should be included in the pro forma adjustments?**

3 A. The pro forma adjustment includes approximately \$3 million in integrity
4 management projects that have been prioritized to address facilities exhibiting
5 targeted risk factors.

6 **Q. MidAmerican applied for and was granted approval to treat costs of the**
7 **McCook flood mitigation as a regulatory asset in docket number NG24-013.**
8 **Can you explain what happened with the McCook lake flooding?**

9 A. On June 23, 2024, the Big Sioux River reached a record crest of 44.84 feet.
10 Floodwaters entered the McCook Lake area and caused severe damage to utility
11 facilities, homes, and transportation infrastructure. A temporary levee
12 constructed across Interstate 29 diverted water toward McCook Lake as part of
13 emergency flood mitigation efforts.

14 **Q. What impacts did the flooding have on MidAmerican's natural gas system?**

15 A. The flooding damaged natural gas facilities serving customers in the McCook
16 Lake area. The gas feed serving 423 customers on the north and west side of
17 McCook Lake lost service when floodwaters damaged the gas line. In addition,
18 roads providing access to facilities, including Northshore Drive, experienced
19 significant damage.

20 **Q. How did MidAmerican respond to this natural disaster?**

21 A, MidAmerican personnel monitored river conditions and proactively closed
22 pipeline segments based on projected flooding levels. After the flooding damaged
23 facilities serving the area, crews capped the line on the east side of McCook Lake

1 to stop the flow of gas to the damaged facilities and protect public safety.
2 MidAmerican arranged for compressed natural gas delivery through a bottle
3 truck service. The bottle truck was placed into service on June 29, 2024, to
4 provide gas service to customers who could safely receive service while
5 restoration efforts continued. We arranged for bottle truck service to ensure
6 customers had access to natural gas during the pendency of restoration efforts.
7 However, the cost of bottle truck service is not part of the regulatory asset. Those
8 costs were included in the purchased gas adjustment rider, consistent with
9 MidAmerican's treatment of costs of the gas itself.

10 **Q. Knowing that bottle truck service was only a temporary solution, what did**
11 **MidAmerican do next to ensure continued natural gas service?**

12 A. MidAmerican worked with the City of North Sioux City, engineers, and
13 contractors to identify a safe restoration solution. On July 10, 2024, a temporary
14 two-inch gas line was installed, allowing pipeline gas service to replace the bottle
15 truck operation. Because the temporary line was above ground and located within
16 an active construction area, it was protected by barricades and fencing and
17 continuously monitored.

18 **Q. Was a permanent solution ultimately implemented?**

19 A. Yes. MidAmerican installed a permanent four-inch gas line on August 6, 2024,
20 replacing the temporary facilities and providing a long-term solution for the
21 affected customers.

