STATE OF MICHIGAN

BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

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| In the matter of the application of **SEMCO ENERGY GAS COMPANY** for authority to amend its Main Replacement Program and Increase the MRP surcharge and for other relief. | Case No. **U-17169** (e-file paperless) |

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**THE MICHIGAN PUBLIC SERVICE COMMISSION STAFF'S**
**INITIAL BRIEF**

In accordance with the Michigan Public Service Commission's (Commission or MPSC) Rules of Practice and Procedure and the schedule established by the Administrative Law Judge (ALJ), the MPSC Staff (Staff) files the following Initial Brief in SEMCO ENERGY GAS COMPANY's (SEMCO or the Company) Application to amend its Main Replacement Program (MRP) and to increase its MRP surcharge.

## HISTORY OF PROCEEDINGS

On December 7, 2012, SEMCO filed an application with the Commission to amend its Main Replacement Program (MRP) and to increase its MRP surcharge. The Company requested authority from the Commission to improve the overall safety and reliability of SEMCO's gas distribution system by revising its MRP to double the amount spent annually and the miles of main replaced, include vintage plastic main as eligible main, and increase the MRP surcharge to recover the capital costs associated with this program.

On January 23, 2013, ALJ Feldman held a prehearing conference. At this hearing, the ALJ granted the Attorney General's (AG) Petition to Intervene.

An evidentiary hearing was held on April 16, 2013, at which time the Company presented the testimony of two witnesses, Marc A. Simone and John R. Alger, and Exhibits A-1 through A-6. Staff presented the testimony of one witness, Bonnie Janssen, and Exhibits S-1 through S-4. The Attorney General presented the testimony of two witnesses, Frank W. Radigan and Michael J. Scott, and Exhibits AG-1 through AG-59. The Commission indicated it would read the record in this case, thereby eliminating the need for a proposal for decision. The ALJ transmitted the record to the Commission for its consideration on April 17, 2013. At the close of the evidentiary record, there were two volumes of transcripts, which consisted of 137 pages, and a number of exhibits that contained a detailed analysis of the issues presented in this case.

**History of the Main Replacement Program**

SEMCO first proposed this MRP in its last general rate case in Case No. U-16169 and received Commission approval on January 6, 2011. This Order stated that,

> "the parties agree that SEMCO shall initiate a new main replacement program (MRP) that the MRP carrying cost rate shall be 11.66%. The parties further agree that SEMCO shall maintain its current main renewal program under existing rates of 9 miles per year in addition to the accelerated MRP, which specified at least an average of $4.4 million per year, approximately 13 additional miles per year." [MPSC Case No. U-16169, Opinion and Order, January 6, 2011, p. 3].

The MRP will reduce corrosion leaks on metallic pipes and address safety issues related to corroded mains and services. Application, ¶ 3. SEMCO is allowed to recover capital related costs for the MRP through a surcharge until the next general

rate case proceeding at which time these investments become part of SEMCO's rate base. Application, ¶ 4.

Within the first year of the MRP, SEMCO retired 16 miles of unprotected metallic main, and an additional 25 miles of unprotected metallic main was replaced under their routine main replacement projects in 2011. Application, ¶ 5

In the second year of the MRP, SEMCO replaced 15 miles of unprotected metallic main. Application, ¶ 6

For both years, the leak rates have been stable, indicating that the renewal of the unprotected metallic main is stabilizing the corrosion leak rates on the unprotected metallic mains and services. Application, ¶ 7

The safety and reliability of a utility's natural gas distribution system is essential. A safe system allows for services to be provided with minimal fear of injury to both the customer and the utility's employees. A reliable system allows a utility to continuously provide for the service needs of its customers.

The issue of maintaining a safe and reliable gas distribution system is one of national importance. As Company witness Marc Simone testified,

> "As bare pipe failed in the 1960's and 1970's it was replaced with coated steel and tied into bare steel systems. These systems were very difficult to cathodically protect because the bare pipe would drain electrical current from the cathodic protection systems of the coated pipe, resulting in both systems being cathodically unprotected." [2 TR 27]
>
> "Unprotected metallic pipe will corrode and leak. By eliminating this class of pipe from SEMCO's system, risk of leakage and the related safety consequence to SEMCO's customers and the general public is also eliminated. The elimination of this class of pipe also reduces the risk to SEMCO's employees in repairing the leaks on

> this type of pipe. When this pipe is found to be leaking, the repair almost always involves exposing the leaking main, cleaning the surface rust and installing a suitable leak clamp to stop the gas from escaping. This task is dangerous due to the fact that employees must work with live gas while repairing these leaks and even after the leak is repaired, the main can still fail as the pipe is being coated or backfilled and expose employees to fire and asphyxiation risks. Many of the tragedies that occur in the natural gas industry are due to the failure of unprotected metallic main. In January of 2011, a utility worker in Philadelphia was killed due to the failure of a cast iron main and resulting fire. In October of 2011, a MichCon employee was tragically asphyxiated while repairing a leak on a cast iron main. Elimination of this class of pipe eliminates these risks to SEMCO's employees, customers and the general public." [2 TR 30]

Thus, SEMCO's MRP was designed and implemented to reduce corrosion leaks on metallic pipe and address safety issues related to corroded mains and services. 2 TR 27. With the increased replacement of bare steel facilities through the MRP, some coated steel systems could be sectionalized and the resultant current would then cathodically protect the coated pipe. Once these pipe sections are cathodically protected, this footage is removed from the classification of unprotected metallic main and added to protected main. *Id.* In 2011 SEMCO moved approximately 200 miles of unprotected metallic main to protected status, and thereby eliminated it from the MRP. 2 TR 28. Also in 2011, SEMCO retired 16.64 miles of main, replaced 19.13 miles of main, installed 1,308 replacement service lines, and retired 1,155 service lines. 2TR 127. With this current rate of replacement, it would take SEMCO 25 years to replace all of the unprotected metallic main. 2 TR 26. Corrosion leaks were stable in 2011 and in 2012 the leaks were beginning to decline in comparison to the five year average. 2 TR 27. Exhibit A-2 represents a graph with the five year average of corrosion leaks from 2007

through 2011 and also the most recent twelve month average, October 2011 through September 2012. The graph depicts a decline of 150 leaks indicating that the renewal of unprotected metallic main is positively affecting the corrosion leak rate on the Company's mains and services. 2 TR 27.

## EXPANSION OF THE MAIN REPLACEMENT PROGRAM

SEMCO is proposing to revise its MRP by doubling the amount spent annually, doubling the miles of main replaced, including vintage plastic main as eligible main, and increasing the MRP surcharge to recover the capital costs associated with this program. Accelerating and expanding the program will allow corrosion leak rates to decrease and will further reduce risk to SEMCO's customers, employees, and the general public by eliminating both unprotected metallic and vintage plastic pipe. 2 TR 28. SEMCO would also accelerate the installation of excess flow valves on residential homes, which are installed to automatically stop the flow of gas when a residential service line begins leaking. 2 TR 128. Staff is in agreement with the Company on revising the MRP by doubling the amount spent annually, doubling the miles of main replaced, including vintage plastic main as eligible main, and increasing the MRP surcharge to recover the capital costs associated with this program. 2 TR 133-134.

### I. Inclusion of Vintage Plastic Main

#### A. Safety

SEMCO, in concurrence with Staff and the AG, proposes to include pre-1978 plastic pipe, designated "vintage pipe", in the MRP. 2 TR 28, 66, 134. This vintage plastic pipe is prone to failure due to its known risk of cracking when subject to

external stress due to ground movement from frost, construction or rock impingement. 2 TR 29. The failure mechanism, referred to as brittle crack failure, usually occurs without warning, is sudden, and could be significant. These failures differs from steel pipe because corrosion leaks in steel pipe start out small, similar to a pin hole and slowly corrode over time. In most cases, the gradual nature of leaks in unprotected metallic pipe allows for time to detect and correct them before they become serious. 2 TR 29. In 1998, the National Transportation Safety Board issued a Special Investigative Report (NTSB/SIR-98/01) that described how plastic pipe installed from the 1960's through the early 1980's may be vulnerable to brittle crack failure that may result in gas leakage and potential hazards to the public and property. Subsequent bulletins offer additional information on brittle crack failure of plastic pipe. 2 TR 28.

Referencing Exhibit S-4, which includes five Pipeline and Hazardous Materials Safety Administration (PHMSA) Advisory Bulletins addressing plastic pipe, Staff witness Janssen stated;

> "the Commission should accept the concept of addressing the vintage (Pre-1978) plastic pipe within this MRP. Furthermore, in 49 CFR Part 192, Subpart P–Gas Distribution Pipeline Integrity Management, it is required that distribution pipeline operators "consider the following categories of threat to each gas distribution pipeline: … material…." "An operator must evaluate the risks associated with its distribution pipeline. In this evaluation, the operator must determine the relative importance of each threat and estimate and rank the risks posed to its pipeline. This evaluation must consider each applicable current and potential threat, the likelihood of failure associated with each threat, and potential consequences of such a failure." "Identify and implement measures to address risks. Determine and implement measures designed to reduce the risks form failure of its gas distribution pipeline." "An operator must re-evaluate threat and risks on its entire pipeline and consider

> the relevance of threats in one location to other areas." As a result of their DIMP threat analysis and program re-evaluation, SEMCO has included the vintage (pre-1978) plastic pipe to address all of its types of high risk pipe that have been identified in the Company's top 1% ranking and to mitigate the threats." [2 TR 131.]

Referencing Exhibit S-1, Staff believes SEMCO has experienced increased leakage on this vintage plastic pipe due to brittle crack failure and subsequently these failures often result in Class One leaks due to the size of the crack and release of gas. 2 TR 130. Only after SEMCO finalized its Distribution Integrity Management Program (DIMP) in July 2011 in accordance with the requirements of the PHMSA was it realized that the vintage plastic pipe had unit segments that were some of the highest risks on their system. 2 TR 29. Thus SEMCO, the Attorney General, and Staff believe this vintage plastic pipe should be included in the MRP because it has a higher risk factor than some of the Company's unprotected metallic pipe as shown on Exhibit AG-25. 2 TR 29, 66, 130. SEMCO has been replacing this vintage plastic pipe every year within their normal MRP and averaging the retirement of 5.6 miles annually since 2007. At the rate, it would take SEMCO 57 years to retire and replace this vintage plastic pipe. 2 TR 30. Therefore, SEMCO and Staff agree that the replacement of the vintage plastic pipe should be accelerated in the same manner as the unprotected metallic main to quickly mitigate the risks posed by vintage plastic pipe. 2 TR 30, 132.

**B. MRP Timeframe**

Within the record of this case filing, there has been discussion on the length of time required to renew all the Company's unprotected metallic and vintage plastic main. SEMCO states that it would take 57 years to retire and replace the

vintage plastic pipe and 25 years to replace all of its unprotected metallic main. 2 TR 26, 30. SEMCO believes that this time period is too long and should be reduced. 2 TR 30. In Michigan Consolidated Gas Company's most recent general rate case order, Case No. U-16999, April 13, 2013, the Commission referenced, "In recent communications, USDOT and PHMSA urged pipeline owners to *accelerate* the replacement of unprotected pipe, and they encouraged state regulatory agencies to consider enhancements to pipeline replacement programs so that high-risk pipelines are replaced at a faster rate." Order, Case No. U-16999, p. 4; Emphasis added. In conclusion the Commission stated, it "takes very seriously its obligation to assure safe and reliable utility service and finds that the MRP and MMO and PI programs are of critical importance in achieving this end. These programs, coupled with funding from the IRM, will permit Mich Con to *accelerate* the replacement or retirement of those pipelines most likely to endanger public safety." *Id.* at 25; Emphasis added.

In addition to including vintage plastic pipe with unprotected metallic pipe in the MRP in accordance with the DIMP program, SEMCO is also proposing to double the mileage of main replaced annually under the MRP from 13 miles to 26 miles and increase the amount of normal routine main replaced from 9 miles to 14.6 miles to increase their removal of vintage plastic pipe. SEMCO's goal is to annually replace 40.6 miles of high risk main. This acceleration of main replacement through the MRP should eliminate all of the unprotected metallic and vintage plastic by 2016, or 9 years soon than the currently approved plan. Staff fully supports this goal. 2 TR 31,129.

SEMCO witness Simone stated the economic benefits of an accelerated MRP are: 1. SEMCO has been able to maintain the per mile cost of installing replacement mains and services despite increases in the cost of materials, fuel and wages. 2. During 2010, SEMCO's cost was $288,000 per mile of main while in 2011, the cost decreased to $276,000 per mile to install replacement main and services. 3. This reduction is due in part to SEMCO's prudence in concentrating its construction crews, project designers and construction permit approvals in a tighter geographic region. 4. This allows the construction crews to concentrate in one geographic area, and eliminates the need to move the construction equipment and crews to repair small pockets of main and service throughput SEMCO's statewide service area. 2 TR 31. Staff agrees with SEMCO's proposal and recommends to the Commission to adopt this acceleration of the MRP. 2 TR 134.

SEMCO would prioritize the main for replacement based upon the DIMP risk model. Some vintage plastic pipe may be replaced prior to unprotected metallic main based on its vicinity to population centers, leak history, and other factors within this DIMP model. Based upon this DIMP model, SEMCO believes that they can continue to reduce pipe failures, reduce leaks, and reduce the safety issues associated with these failures and thereby increase the safety and integrity of its natural gas system. Staff endorses this enhanced program and agrees that it will make a safer environment for SEMCO's customers, employees, and the general public. 2 TR 133.

Staff supports the need to expand the size of the MRP. Staff agrees with this assessment and directs the Commission's attention to the fact that SEMCO has

proven that it now can perform at the level established in Case No. U-16169 and in each year 2011 and 2012, it has exceeded the previously established levels. 2 TR 127; Exhibit AG-56.

In summary, Staff witness Janssen supports the acceleration of the MRP for the following reasons:

1) The regulatory rules that require SEMCO to establish the Main Replacement Program.

2) The federal government through its laws and the documents issued by its agencies has continued to emphasize the need for accelerated replacement programs.

3) The amount of high risk distribution main that the Company currently has in its system including the vintage plastic pipe.

4) The rate of corrosion leaks that the Company is experiencing.

5) The Company's commitment to the MRP and the Company's 2011 and 2012 expansion of the program beyond levels established in U-16169.

6) The need for a safe and reliable natural gas distribution system for the SEMCO customers, SEMCO employees, and all the citizens of the State of Michigan.

## II. Funding for the Main Replacement Program

SEMCO proposes to expand the annual capital spending levels for the MRP from the level previously approved by the Commission. SEMCO requests the doubling of the MRP capital investment dollars from $4.4 million annually to $8.7 million in 2013, $9.0 million in 2014, and $9.2 million in 2015 under this proposed MRP. 2 TR 32. As such, the Company seeks to recover the cost of service related to these main replacement capital expenditures from January 1, 2011 -December 31, 2015. Without the Commission approval of the proposed doubling of this recovery mechanism, SEMCO's ability to finance the MRP projects without returning annually for fully ligated rates cases would be greatly limited.

Mr. Simone stated that "the funding level proposed by SEMCO is necessary to ensure timely replacement of unprotected metallic and vintage plastic pipe that is known to fail due to corrosion and brittle crack failure". 2 TR 36. As mentioned above, under SEMCO's current MRP program and normal routine main replacement, the unprotected metallic main would be replaced in 25 years while the vintage plastic pipe would be replaced in 57 years. However, it would only take SEMCO *14 years* to replace all of the unprotected metallic and vintage plastic pipe mains in their service territory under this proposed accelerated MRP. 2 TR 36; Emphasis added. If the Company was ordered to include the vintage plastic pipe in the current MRP with no additional funding, the timeframe for the complete removal all of the unprotected metallic and vintage plastic pipe mains in their service territory would take twice as long. Instead of a 14 year program, the program would take 28 years to complete. Therefore SEMCO requests the doubling of the MRP capital investment dollars from $4.4 million annually to $8.7 million in 2013, $9.0 million in 2014, and $9.2 million in 2015 under this proposed MRP. 2 TR 32 Staff is in agreement with SEMCO's request to accelerate its MRP by doubling the amount spent annually. 2 TR 129.

SEMCO's current MRP received Commission approval on January 6, 2011 and set up the current amount of $4.4 million to be spent annually. 2 TR 126, 127. The MRP surcharge is based upon a five year average (2011-2015) of the capital costs associated with the incremental capital associated with the MRP projects. 2 TR 129. SEMCO began billing the MRP surcharge in June 2012 as a monthly per customer meter charge applicable to all of the Company's customer classes. *Id.* The

surcharge began in June 2012 as a result of making sure that the Company did indeed fulfill their goals of replacing 9 miles of unprotected metallic main in 2011. *Id.* Thus the Company has not yet completed a full year of surcharges but has replaced 33 miles of main and spent nearly $9 million in 2011 and 2012.

Since the Commission has indicated it will read the record in this case thus eliminating the need for a Proposal for Decision, a Commission order in this case could be assumed to be accelerated and thus removes the need to address Staff's Exhibit S-2. Staff witness Janssen had proposed a slight decrease in the investment capital expenditures for year 2013 by 50% with the assumption that the case would go through full ligation and that a Commission order would not be issued until September 2013 or later. 2 TR 133. Therefore Staff is in agreement with the Company's Revised Exhibits A-3 and A-4 and the supplemental testimony of SEMCO witness John Alger. SEMCO witness Alger states, "My supplemental direct testimony is submitted (i) to recalculate the average cumulative costs based on the second through fifth years to correct for this overstatement; (ii) to provide a Revised Exhibit A-3, Page 1 of 2, reducing the cumulative costs as shown on Line 7, Column H as well on Page 2 of 2, Lines 2 and 10 under the column heading "Total Company"- which has the effect of lowering the monthly recovery rates for all rate classes smaller than TR-3, as shown on Page 2 of 2, Line 21; and (iii) to provide a Revised Corrected Exhibit A-4, Page 2 of 2, reflecting the reductions in rates." 2 TR 52. Furthermore, the Company proposes implementing this revised MRP charge beginning in June 2013 if Commission approval is granted.

Staff supports the calculations in Revised Exhibit A-3 and Revised Corrected Exhibit A-4 and recommends a Commission Order granting approval be issued in May 2013, so the four year average rate can be surcharged beginning June 2013. Staff further supports the minor increase in the monthly customer surcharge for residential customers from $0.25 to $0.42. Furthermore Staff witness Janssen stated, "Staff agrees that the time is ideal to do this work, considering the low natural gas commodity cost currently being charged to SEMCO's customers." SEMCO's current gas cost recovery factor for the month of March 2013 is $4.08 per Mcf. This is less than half of what it was five years ago, which at that time was $9.35 per Mcf. SEMCO's gas cost recovery factor is projected to remain at the current low level rate for the next several years. 2 TR 129-130.

## III. Regulatory Requirements

SEMCO is required to operate programs such as the MRP and must maintain a safe, reliable natural gas system that is required by the Michigan Gas Safety Standards, Mich Admin Code R 460.20101 - R 460.20606, and Code of Federal Pipeline Safety Regulations mandated by the United States Department of Transportation. 2 TR 135.

Staff recommends that the Commission support the program as presented by SEMCO and Staff and approve the doubling of the capital expenditures with the MRP as summarized on Exhibit A-1. The proposed surcharges derived on Revised Exhibit A-3, should be approved by the Commission. These surcharges, if approved by the Commission, would be fixed through May 31, 2016, which is the end of the five year program as established in Case No. U-16169. This MRP Rider is a fixed

surcharge for the next four years. It is not calculated as an automatic adjustment mechanism. 2 TR 58. It is not a tracking mechanism; it is a fixed rate surcharge for the period of June 1, 2013-May 31, 2016, (covering the capital expenditures of 2011-2015). 2 TR 58, 129. SEMCO's MRP requires the Company to spend an annual amount of capital dollars in a given year (proposed in this case of $8.7 million in 2013, $9.0 million in 2014, and $9.2 million in 2015) to replace a minimum number of miles of pipe. The money designated for this main replacement program should only be used for this program and not shifted to any other capital investment program. Staff does not agree to the shifting of unspent dollars specifically set aside for a specific safety program to other capital programs, nor does Staff believe that it is reasonable to spend these designated dollar amounts on other capital projects. This specific MRP capital should not be used for other capital projects, dividends, bonuses or any other purpose the Company may wish to apply it to.

**CONCLUSION**

Staff recommends approval of SEMCO's Main Replacement Program. This mechanism will allow the Company to fund its accelerated Main Replacement Program and will assist SEMCO in significantly improve the safety and reliability of its distribution system.

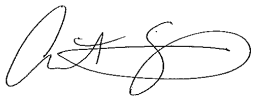
Staff believes that the Main Replacement Program is a reasonable way to fund these substantial capital investments. While agreeing with the costs necessary to implement its program, Staff notes that approval of the mechanism should not be used by management as an offset to other capital projects, which

includes dollars already in rates, and the Company should continue to work diligently to maximize the plan's efficiency, cost effectiveness, and budgeting.

Staff agrees with the MRP rider surcharges as calculated on Exhibit A-2 and as tabulated on Revised Corrected Exhibit A-4, Rider MRP tariff sheet.

Respectfully submitted,

**MICHIGAN PUBLIC SERVICE COMMISSION STAFF**



Amit T. Singh (P75492)
Assistant Attorney General
Public Service Division
6520 Mercantile Way, Suite 1
Lansing, MI 48911
Telephone: (517) 241-6680

Dated: May 1, 2013
17169/Initial Brief

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**SEMCO ENERGY GAS COMPANY** for authority to amend its Main Replacement Program and Increase the MRP surcharge and for other relief.
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Case No. **U-17169**
(e-file paperless)

**PROOF OF SERVICE**

STATE OF MICHIGAN )
) ss
COUNTY OF INGHAM )

CORINNA C. SWAFFORD, being first duly sworn, deposes and says that on **May 1, 2013**, she served a true copy of the **MPSC Staff's Initial Brief** upon the following parties **VIA E-MAIL ONLY:**

**SEMCO Energy Gas Company**
Albert Ernst
Shaun Johnson
Courtney F. Kissel
Dykema Gossett
Capitol View
201 Townsend St., Ste. 900
Lansing, MI 48933
aernst@dykema.com
sjohnson@dykema.com
ckissel@dykema.com

**AG Bill Schuette**
John A. Janiszewski
Assistant Attorney General
Environment, Natural Resources, and Agriculture Div.
G. Mennen Williams Bldg., 6th Floor
525 W. Ottawa St; P.O. Box 30755
Lansing, MI 48909
janiszewskij2@michigan.gov

**Administrative Law Judge**
Hon. Sharon L. Feldman
Administrative Law Judge
Michigan Public Service Comm.
525 W. Allegan St.
3rd Floor, North Tower
Lansing, MI 48913
feldmans@michigan.gov

Corinna C. Swafford

**CORINNA C. SWAFFORD**

Subscribed and sworn to before me
this **1st** day of **May, 2013**.

Pamela A. Pung

Pamela A. Pung, Notary Public
State of Michigan, County of Clinton
Acting in the County of Ingham
My Commission Expires: 5-7-2018