

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 implement a gas cost	)	Case No. U- 14718
recovery plan and factors for the 12-month	)	
period of April 2006 through March 2007	)	
	)	

QUALIFICATIONS AND DIRECT TESTIMONY OF

LISA M. KINDSCHY

MICHIGAN PUBLIC SERVICE COMMISSION

May 30, 2006

QUALIFICATIONS OF LISA M. KINDSCHY
CASE NUMBER U-14718
PART I

1 Q. Please state your name and business address.

2 A. My name is Lisa M. Kindschy. My business address is 6545 Mercantile Way,
3 Lansing, MI 48911.

4 Q. Where are you currently employed and in what position?

5 A. I am employed as a Public Utilities Engineer with the Michigan Public Service
6 Commission (MPSC) in the Regulated Energy Division.

7 Q. What are your responsibilities in your current position?

8 A. I perform technical analyses in Gas Cost Recovery (GCR) plan and reconciliation
9 proceedings. Also, I perform the evaluation and review of GCR plans and
10 reconciliations and develop Staff's position as appropriate. I am responsible for
11 daily monitoring of the natural gas market and closely tracking any price
12 movement. During my time with the MPSC, I have attended two natural gas
13 outreach sessions offered by Consumers Energy Company. I have also filed
14 testimony in Consumers' Gas Rate Case, U-14547 and in Michigan Gas Utilities
15 Corporation's Plan Case, U-14715. In April 2006, I attended a seminar sponsored
16 by New Energy entitled "How to Manage Your Gas Supply Portfolio in an
17 Uncertain Gas Market." The focus of the seminar was on hedging strategies and
18 methods to reduce volatility when purchasing natural gas.

19 Q. Would you describe your educational background and work experience?

20 A. I obtained a Masters of Science degree in Biosystems Engineering from Michigan
21 State University (MSU) in May 2005. I completed a Bachelors of Science degree
22 in the same major, with honors, also from MSU in May of 2002. During my
23 undergraduate tenure, I was awarded two academic scholarships, and I was

QUALIFICATIONS OF LISA M. KINDSCHY
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PART I

1 inducted into Tau Beta Pi, the National Engineering Honor Society. I also
2 worked at Consumers Energy Company from May through December 2000 as an
3 engineer in the Natural Gas Mapping Area. In April 2002, I passed the
4 Fundamentals of Engineering Exam, the first part of the process for becoming a
5 licensed Professional Engineer in the State of Michigan.

DIRECT TESTIMONY OF LISA M. KINDSCHY
CASE NUMBER U-14718
PART II

1 Q. What is the purpose of your testimony in this proceeding?

2 A. The purpose of my testimony is to present Staff's new base GCR factor and the
3 Multi-Input Incremental GCR Contingent Factor Tariff.

4 Q. Are you sponsoring any exhibits in connection with your testimony?

5 A. Yes, I am sponsoring two exhibits:

6 Exhibit S-1 (LMK-1) Incremental GCR Contingent Matrix Tariff Sheet

7 Exhibit S-2 (LMK-2) Calculation of Staff's Proposed Base GCR Factor

8 Q. Were these exhibits prepared by you?

9 A. Yes, I was responsible for calculating the new base GCR factor for SEMCO
10 Energy Gas Company (SEMCO) using recent New York Mercantile Exchange
11 futures prices (NYMEX) and assembling the Multi-Input GCR contingent matrix
12 tariff sheet. The theoretical work done to create the new Multi-Input fractional
13 multipliers was performed by Staff witness Nora Quilico and myself.

14 Q. How was the new base GCR factor for SEMCO calculated?

15 A. Using the company's plan filing, Staff calculated new Summer and Winter
16 fractional multipliers (Exhibit S-3 (NBQ-1)) for the contingency matrix. These
17 multipliers are based on the amount of fixed price supply the company secured
18 and will have secured by November 2006, the amount of storage gas withdrawn,
19 the amount of index based supply, and their required purchases. The first quarter
20 fractional multipliers were subsequently used to adjust the original base factor of
21 \$12.0545 per Mcf filed by the company (which only includes the projected cost of
22 gas, no under-recovery as stated in the direct testimony of John Alger), down to a
23 new base factor of \$9.9328 per Mcf.

DIRECT TESTIMONY OF LISA M. KINDSCHY
CASE NUMBER U-14718
PART II

1 Q. What is the basis for the downward adjustment of the company's originally filed
2 base GCR factor?

3 A. SEMCO filed their plan case in December 2005. This filing used the April 2006 -
4 March 2007 NYMEX futures strip averages from the first five trading days in
5 December 2005 to calculate the base factor. At that time, gas prices were still
6 very high following the hurricanes in the fall of 2005. Staff adjusted the original
7 GCR factor downward by using the April 2006 - March 2007 NYMEX strip
8 averages from the first five trading days in May of 2006 (May 1-5). To do this,
9 the "December 2005" and "May 2006" Summer (April-October 2006) and Winter
10 (November 2006-March 2007) strips were calculated using the five day averages
11 described above. The differences in the summer strips and the winter strips were
12 calculated for the May 2006 and December 2005 NYMEX price averages. The
13 absolute values of the differences were then used to locate adjustments on the new
14 Multi-Input contingency matrix in the first quarter columns.

15 Q. What was the result of this procedure?

16 A. This process resulted in a summer adjustment of -\$1.6695 and a winter
17 adjustment of -\$0.4522. The adjustments are negative because the change in the
18 NYMEX summer and winter strips was negative, reflecting reduced natural gas
19 prices experienced from December 2005 to May 2006. To obtain the new base
20 factor of \$9.9328 per Mcf, the summer and winter adjustments were added to the
21 Company's original base factor. This calculation is shown on Exhibit S-2 (LMK-
22 2).

23 Q. How is this new base GCR factor to be used?

DIRECT TESTIMONY OF LISA M. KINDSCHY
CASE NUMBER U-14718
PART II

1 A. Any adjustments resulting from the new Multi-Input contingency matrix will be
2 made to this base factor. But, in no instance will the new factor be lower than the
3 Commission approved base GCR factor.

4 Q. How has the new Multi-Input contingency matrix, Exhibit S-1 (LMK-1), been
5 changed to reflect Staff's new base factor?

6 A. The fractional multipliers are those calculated by Ms. Quilico and are shown in
7 Exhibit S-3 (NBQ-1). The "Base GCR factor" shown in the matrix is Staff's new
8 calculated base factor as described above. In addition, the "Plan NYMEX" in the
9 Summer and Winter columns has been changed to reflect the NYMEX price strips
10 that were used in the calculation of the new base GCR factor. These are now the
11 April - October 2006 strip for the Summer, and the November 2006 - March 2007
12 strip for the Winter, calculated from the first five trading days of May, not the
13 December NYMEX averages used to calculate the company's original base factor
14 in their plan filing.

15 Q. How are adjustments using the new Multi-Input contingency matrix calculated?

16 A. To make an adjustment, the current Summer and Winter NYMEX futures strip
17 averages are calculated using five day averages from the first five trading days of
18 the month prior to implementation of the adjustment. The differences between
19 the current NYMEX Summer and Winter strips and the "Plan NYMEX" strips are
20 calculated. These differences are used to locate incremental Summer and Winter
21 adjustments on the matrix. The two adjustments are added to the base GCR factor
22 of \$9.9328 per Mcf.

DIRECT TESTIMONY OF LISA M. KINDSCHY
CASE NUMBER U-14718
PART II

1 Q. How are the current Summer and Winter NYMEX strip averages calculated when
2 the company makes a quarterly adjustment?

3 A. The Summer NYMEX strip average is calculated using an average of five days of
4 NYMEX data for all seven summer months (April-October 2006). Final monthly
5 closing prices are used for summer months that are no longer trading. For
6 example, when making a July adjustment, the final closing prices for April, May,
7 and June will be used with the five day averages for July through October to
8 calculate the current Summer NYMEX strip. All seven summer months are used
9 because the summer strip is used to adjust the price of flowing summer supplies
10 as well as gas being injected into storage. Since gas is injected into storage
11 throughout the summer, the price of gas for months that are no longer trading is
12 needed to account for injections into storage throughout the entire summer
13 injection season that will be withdrawn in the winter. The Winter NYMEX strip
14 average (November 2006 - March 2007) is calculated using a five day average of
15 NYMEX price data for the remaining winter months in the plan year. For
16 example, a January adjustment would use NYMEX price data for January through
17 March to calculate the current Winter NYMEX futures strip.

18 Q. How often are these adjustments to be made?

19 A. These adjustments are to be made every quarter for the four quarters of the plan
20 period. An adjustment is made regardless of whether the adjustment increases or
21 decreases the factor from the previous quarter's maximum allowable factor. The
22 adjustments can increase or decrease the maximum allowable factor from one
23 quarter to the next, but the GCR factor can never fall below the base factor of

DIRECT TESTIMONY OF LISA M. KINDSCHY
CASE NUMBER U-14718
PART II

1 \$9.9328 per Mcf. Recalculation of the maximum allowable GCR factor every
2 quarter complies with the Commission's requirement for symmetry in its order in
3 case number U-13902.

4 Q. What is the maximum contingent increase included into the matrix and
5 recommended by Staff?

6 A. Staff is recommending the matrix adjust for up to a \$3.00 increase in NYMEX
7 futures prices. Any increase to the GCR factor desired beyond the \$3.00 cap on
8 the contingency matrix will require that the company file a re-opener of the plan
9 case under section 6h(10) of Act 304.

10 Q. Does this conclude your testimony at this time?

11 A. Yes, it does.

S T A T E O F M I C H I G A N
B E F O R E T H E M I C H I G A N P U B L I C S E R V I C E C O M M I S S I O N

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for authority to implement a gas cost	)	Case No. U- 14718
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EXHIBITS OF

LISA M. KINDSCHY

MICHIGAN PUBLIC SERVICE COMMISSION

May 30, 2006

Case No.: U-14718
 Exhibit: S-1 (LMK-1)
 Witness: Lisa M. Kindschy
 Date: May 30, 2006
 Page No.: 1 of 2

		April-June 1st Q		July-Sept 2nd Q		Oct-Dec 3rd Q		Jan-Mar 4th Q	
		Summer	Winter	Summer	Winter	Summer	Winter	Summer	Winter
		April-Oct	Nov-Mar	April-Oct	Nov-Mar	April-Oct	Nov-Mar	April-Oct	Nov-Mar
Fractional Mult. F_m		0.477	0.476	0.400	0.468	0.357	0.367	0.342	0.385
Plan NYMEX (X_{plan})		\$7.2747	\$10.8603	\$7.2747	\$10.8603	\$7.2747	\$10.8603	\$7.2747	\$11.4099
Base GCR Factor		\$9.9328	\$9.9328	\$9.9328	\$9.9328	\$9.9328	\$9.9328	\$9.9328	\$9.9328
NYMEX Increase Greater than Or Equal to		Incremental Contingent GCR Factor \$/Mcf							
But Less than									
\$0.00	\$0.05	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000
\$0.05	\$0.10	\$0.0239	\$0.0238	\$0.0200	\$0.0234	\$0.0179	\$0.0184	\$0.0171	\$0.0193
\$0.10	\$0.15	\$0.0477	\$0.0476	\$0.0400	\$0.0468	\$0.0357	\$0.0367	\$0.0342	\$0.0385
\$0.15	\$0.20	\$0.0716	\$0.0714	\$0.0600	\$0.0702	\$0.0536	\$0.0551	\$0.0513	\$0.0578
\$0.20	\$0.25	\$0.0954	\$0.0952	\$0.0800	\$0.0936	\$0.0714	\$0.0734	\$0.0684	\$0.0770
\$0.25	\$0.30	\$0.1193	\$0.1190	\$0.1000	\$0.1170	\$0.0893	\$0.0918	\$0.0855	\$0.0963
\$0.30	\$0.35	\$0.1431	\$0.1428	\$0.1200	\$0.1404	\$0.1071	\$0.1101	\$0.1026	\$0.1155
\$0.35	\$0.40	\$0.1670	\$0.1666	\$0.1400	\$0.1638	\$0.1250	\$0.1285	\$0.1197	\$0.1348
\$0.40	\$0.45	\$0.1908	\$0.1904	\$0.1600	\$0.1872	\$0.1428	\$0.1468	\$0.1368	\$0.1540
\$0.45	\$0.50	\$0.2147	\$0.2142	\$0.1800	\$0.2106	\$0.1607	\$0.1652	\$0.1539	\$0.1733
\$0.50	\$0.55	\$0.2385	\$0.2380	\$0.2000	\$0.2340	\$0.1785	\$0.1835	\$0.1710	\$0.1925
\$0.55	\$0.60	\$0.2624	\$0.2618	\$0.2200	\$0.2574	\$0.1964	\$0.2019	\$0.1881	\$0.2118
\$0.60	\$0.65	\$0.2862	\$0.2856	\$0.2400	\$0.2808	\$0.2142	\$0.2202	\$0.2052	\$0.2310
\$0.65	\$0.70	\$0.3101	\$0.3094	\$0.2600	\$0.3042	\$0.2321	\$0.2386	\$0.2223	\$0.2503
\$0.70	\$0.75	\$0.3339	\$0.3332	\$0.2800	\$0.3276	\$0.2499	\$0.2569	\$0.2394	\$0.2695
\$0.75	\$0.80	\$0.3578	\$0.3570	\$0.3000	\$0.3510	\$0.2678	\$0.2753	\$0.2565	\$0.2888
\$0.80	\$0.85	\$0.3816	\$0.3808	\$0.3200	\$0.3744	\$0.2856	\$0.2936	\$0.2736	\$0.3080
\$0.85	\$0.90	\$0.4055	\$0.4046	\$0.3400	\$0.3978	\$0.3035	\$0.3120	\$0.2907	\$0.3273
\$0.90	\$0.95	\$0.4293	\$0.4284	\$0.3600	\$0.4212	\$0.3213	\$0.3303	\$0.3078	\$0.3465
\$0.95	\$1.00	\$0.4532	\$0.4522	\$0.3800	\$0.4446	\$0.3392	\$0.3487	\$0.3249	\$0.3658
\$1.00	\$1.05	\$0.4770	\$0.4760	\$0.4000	\$0.4680	\$0.3570	\$0.3670	\$0.3420	\$0.3850
\$1.05	\$1.10	\$0.5009	\$0.4998	\$0.4200	\$0.4914	\$0.3749	\$0.3854	\$0.3591	\$0.4043
\$1.10	\$1.15	\$0.5247	\$0.5236	\$0.4400	\$0.5148	\$0.3927	\$0.4037	\$0.3762	\$0.4235
\$1.15	\$1.20	\$0.5486	\$0.5474	\$0.4600	\$0.5382	\$0.4106	\$0.4221	\$0.3933	\$0.4428
\$1.20	\$1.25	\$0.5724	\$0.5712	\$0.4800	\$0.5616	\$0.4284	\$0.4404	\$0.4104	\$0.4620
\$1.25	\$1.30	\$0.5963	\$0.5950	\$0.5000	\$0.5850	\$0.4463	\$0.4588	\$0.4275	\$0.4813
\$1.30	\$1.35	\$0.6201	\$0.6188	\$0.5200	\$0.6084	\$0.4641	\$0.4771	\$0.4446	\$0.5005
\$1.35	\$1.40	\$0.6440	\$0.6426	\$0.5400	\$0.6318	\$0.4820	\$0.4955	\$0.4617	\$0.5198
\$1.40	\$1.45	\$0.6678	\$0.6664	\$0.5600	\$0.6552	\$0.4998	\$0.5138	\$0.4788	\$0.5390
\$1.45	\$1.50	\$0.6917	\$0.6902	\$0.5800	\$0.6786	\$0.5177	\$0.5322	\$0.4959	\$0.5583
\$1.50	\$1.55	\$0.7155	\$0.7140	\$0.6000	\$0.7020	\$0.5355	\$0.5505	\$0.5130	\$0.5775
\$1.55	\$1.60	\$0.7394	\$0.7378	\$0.6200	\$0.7254	\$0.5534	\$0.5689	\$0.5301	\$0.5968
\$1.60	\$1.65	\$0.7632	\$0.7616	\$0.6400	\$0.7488	\$0.5712	\$0.5872	\$0.5472	\$0.6160
\$1.65	\$1.70	\$0.7871	\$0.7854	\$0.6600	\$0.7722	\$0.5891	\$0.6056	\$0.5643	\$0.6353
\$1.70	\$1.75	\$0.8109	\$0.8092	\$0.6800	\$0.7956	\$0.6069	\$0.6239	\$0.5814	\$0.6545
\$1.75	\$1.80	\$0.8348	\$0.8330	\$0.7000	\$0.8190	\$0.6248	\$0.6423	\$0.5985	\$0.6738
\$1.80	\$1.85	\$0.8586	\$0.8568	\$0.7200	\$0.8424	\$0.6426	\$0.6606	\$0.6156	\$0.6930
\$1.85	\$1.90	\$0.8825	\$0.8806	\$0.7400	\$0.8658	\$0.6605	\$0.6790	\$0.6327	\$0.7123
\$1.90	\$1.95	\$0.9063	\$0.9044	\$0.7600	\$0.8892	\$0.6783	\$0.6973	\$0.6498	\$0.7315
\$1.95	\$2.00	\$0.9302	\$0.9282	\$0.7800	\$0.9126	\$0.6962	\$0.7157	\$0.6669	\$0.7508

NYMEX Increase = ($X - X_{plan}$)

X = the simple average of the actual NYMEX monthly natural gas futures contract prices, (\$/MMBtu), for the entire summer (Apr-Oct) closing prices should be used for summer months that are no longer trading, and remaining winter (Nov-Mar) months of the GCR period, (averaged over first five trading days of the month prior to implementation)

X_{plan} = the NYMEX average summer and winter strips incorporated in the calculation of the base GCR factor, as delineated in the above chart

At least fifteen days before the beginning of each quarter, the company shall file with the Michigan Public Service Commission an updated Tariff Sheet No. 16, if NYMEX futures prices increase to a level allowing for the implementation of a higher contingent GCR price ceiling. The informational filing shall include all supporting documents necessary to verify the new price ceiling, including a copy of the calculation of the five-day average of the NYMEX strips for the remaining months of the GCR period, and a copy of the NYMEX futures prices sheets for the first five trading days of the month, such sheets being an authoritative source used by the gas industry. The filing shall be incorporated into the GCR Plan docket U-14718 with notice of filing provided to all interveners.

Case No.: U-14718
Exhibit: S-1 (LMK-1)
Witness: Lisa M. Kindschy
Date: May 30, 2006
Page No.: 2 of 2

		April-June 1st Q		July-Sept 2nd Q		Oct-Dec 3rd Q		Jan-Mar 4th Q	
		Summer	Winter	Summer	Winter	Summer	Winter	Summer	Winter
		April-Oct	Nov-Mar	April-Oct	Nov-Mar	April-Oct	Nov-Mar	April-Oct	Jan-Mar
Fractional Mult. F_m		0.477	0.476	0.400	0.468	0.357	0.367	0.342	0.385
Plan NYMEX (X_{plan})		\$7.2747	\$10.8603	\$7.2747	\$10.8603	\$7.2747	\$10.8603	\$7.2747	\$11.4099
Base GCR Factor		\$9.9328	\$9.9328	\$9.9328	\$9.9328	\$9.9328	\$9.9328	\$9.9328	\$9.9328
NYMEX Increase Greater than But Less Or Equal to than		Incremental Contingent GCR Factor \$/Mcf							
\$2.00	\$2.05	\$0.9540	\$0.9520	\$0.8000	\$0.9360	\$0.7140	\$0.7340	\$0.6840	\$0.7700
\$2.05	\$2.10	\$0.9779	\$0.9758	\$0.8200	\$0.9594	\$0.7319	\$0.7524	\$0.7011	\$0.7893
\$2.10	\$2.15	\$1.0017	\$0.9996	\$0.8400	\$0.9828	\$0.7497	\$0.7707	\$0.7182	\$0.8085
\$2.15	\$2.20	\$1.0256	\$1.0234	\$0.8600	\$1.0062	\$0.7676	\$0.7891	\$0.7353	\$0.8278
\$2.20	\$2.25	\$1.0494	\$1.0472	\$0.8800	\$1.0296	\$0.7854	\$0.8074	\$0.7524	\$0.8470
\$2.25	\$2.30	\$1.0733	\$1.0710	\$0.9000	\$1.0530	\$0.8033	\$0.8258	\$0.7695	\$0.8663
\$2.30	\$2.35	\$1.0971	\$1.0948	\$0.9200	\$1.0764	\$0.8211	\$0.8441	\$0.7866	\$0.8855
\$2.35	\$2.40	\$1.1210	\$1.1186	\$0.9400	\$1.0998	\$0.8390	\$0.8624	\$0.8037	\$0.9047
\$2.40	\$2.45	\$1.1448	\$1.1424	\$0.9600	\$1.1232	\$0.8568	\$0.8808	\$0.8208	\$0.9240
\$2.45	\$2.50	\$1.1687	\$1.1662	\$0.9800	\$1.1466	\$0.8746	\$0.8991	\$0.8379	\$0.9432
\$2.50	\$2.55	\$1.1925	\$1.1900	\$1.0000	\$1.1700	\$0.8925	\$0.9175	\$0.8550	\$0.9625
\$2.55	\$2.60	\$1.2164	\$1.2138	\$1.0200	\$1.1934	\$0.9103	\$0.9358	\$0.8721	\$0.9817
\$2.60	\$2.65	\$1.2402	\$1.2376	\$1.0400	\$1.2168	\$0.9282	\$0.9542	\$0.8892	\$1.0010
\$2.65	\$2.70	\$1.2641	\$1.2614	\$1.0600	\$1.2402	\$0.9460	\$0.9725	\$0.9063	\$1.0203
\$2.70	\$2.75	\$1.2879	\$1.2852	\$1.0800	\$1.2636	\$0.9639	\$0.9909	\$0.9234	\$1.0395
\$2.75	\$2.80	\$1.3118	\$1.3090	\$1.1000	\$1.2870	\$0.9817	\$1.0093	\$0.9405	\$1.0588
\$2.80	\$2.85	\$1.3356	\$1.3328	\$1.1200	\$1.3104	\$0.9996	\$1.0276	\$0.9576	\$1.0780
\$2.85	\$2.90	\$1.3595	\$1.3566	\$1.1400	\$1.3338	\$1.0175	\$1.0460	\$0.9747	\$1.0973
\$2.90	\$2.95	\$1.3833	\$1.3804	\$1.1600	\$1.3572	\$1.0353	\$1.0643	\$0.9918	\$1.1165
\$2.95	\$3.00	\$1.4072	\$1.4042	\$1.1800	\$1.3806	\$1.0532	\$1.0827	\$1.0089	\$1.1358

$$\text{NYMEX Increase} = (X - X_{plan})$$

X = the simple average of the actual NYMEX monthly natural gas futures contract prices, (\$/MMBtu), for the entire summer (Apr-Oct) closing prices should be used for summer months that are no longer trading, and remaining winter (Nov-Mar) months of the GCR period, (averaged over first five trading days of the month prior to implementation)

X_{plan} = the NYMEX average summer and winter strips incorporated in the calculation of the base GCR factor, as delineated in the above chart

At least fifteen days before the beginning of each quarter, the company shall file with the Michigan Public Service Commission an updated Tariff Sheet No. 16, if NYMEX futures prices increase to a level allowing for the implementation of a higher contingent GCR price ceiling. The informational filing shall include all supporting documents necessary to verify the new price ceiling, including a copy of the calculation of the five-day average of the NYMEX strips for the remaining months of the GCR period, and a copy of the NYMEX futures prices sheets for the first five trading days of the month, such sheets being an authoritative source used by the gas industry. The filing shall be incorporated into the GCR Plan docket U-14718 with notice of filing provided to all interveners.

Calculation of Staff's Proposed Base GCR Factor

	<u>Dec-05*</u>	<u>Company Dec Ave</u>	<u>May-06**</u>	<u>Staff May Ave</u>	<u>NYMEX Difference (\$/MMBtu)</u>	<u>Incremental Adjustment (\$/Mcf)</u>	<u>GCR Factor (\$/Mcf)</u>
<u>Summer</u>							
Apr-06	\$10.934	\$10.7947	7.233	\$7.2747	-\$3.5201	-\$1.6695	Total
May-06	\$10.692		7.198				Adjustments
Jun-06	\$10.724		6.746				-\$2.1217
Jul-06	\$10.764		7.006				
Aug-06	\$10.807		7.261				
Sep-06	\$10.799		7.544				Company's
Oct-06	\$10.843		7.935				Old Base
							\$12.0545
<u>Winter</u>							
Nov-06	\$11.309	\$11.8158	9.348	\$10.8603	-\$0.9555	-\$0.4522	Staff's
Dec-06	\$11.769		10.724				New Base
Jan-07	\$12.144		11.468	\$11.4099			\$9.9328
Feb-07	\$12.080		11.482	(Jan-Mar)			
Mar-07	\$11.777		11.280				

NYMEX Futures Prices (\$/MMBtu)

<u>Contract Month</u>	<u>Mon 5/1/2006</u>	<u>Tue 5/2/2006</u>	<u>Wed 5/3/2006</u>	<u>Thu 5/4/2006</u>	<u>Fri 5/5/2006</u>	<u>Average</u>	
Apr-06						7.233	Close
May-06						7.198	Close
Jun-06	6.695	6.746	6.606	6.906	6.775	6.746	
Jul-06	6.970	7.016	6.866	7.146	7.032	7.006	
Aug-06	7.230	7.281	7.126	7.386	7.282	7.261	
Sep-06	7.515	7.566	7.406	7.666	7.567	7.544	
Oct-06	7.910	7.961	7.786	8.051	7.967	7.935	
Nov-06	9.355	9.396	9.266	9.391	9.332	9.348	
Dec-06	10.770	10.786	10.691	10.691	10.682	10.724	
Jan-07	11.530	11.541	11.456	11.391	11.420	11.468	
Feb-07	11.537	11.553	11.476	11.406	11.440	11.482	
Mar-07	11.340	11.351	11.271	11.201	11.235	11.280	

* The December 2005 NYMEX strip numbers are averages based on the first five trading days in December 2005. MGU used these averages in their plan case filing for calculation of the original base factor.

** The May 2006 NYMEX strip numbers are averages based on the first five trading days in May 2006. These averages were used by Staff to calculate the new base factor.

S T A T E O F M I C H I G A N
B E F O R E T H E M I C H I G A N P U B L I C S E R V I C E C O M M I S S I O N

* * * *

In the matter of the application of	)	
SEMCO ENERGY GAS COMPNAY	)	
for authority to implement a gas cost	)	Case No. U- 14718
recovery plan and factors for the 12-month	)	
period of April 2006 through March 2007	)	
	)	

Q U A L I F I C A T I O N S A N D D I R E C T T E S T I M O N Y O F

N O R A B . Q U I L I C O

M I C H I G A N P U B L I C S E R V I C E C O M M I S S I O N

May 30, 2006

QUALIFICATIONS OF NORA B. QUILICO
CASE NUMBER U-14718
PART I

1 Q. Please state your name and business address.

2 A. My name is Nora B. Quilico, and my business address is 6545 Mercantile Way,
3 Lansing, Michigan 48911.

4 Q. Ms. Quilico, where are you currently employed and in what position?

5 A. I am employed by the Michigan Public Service Commission (MPSC) as a Public
6 Utilities Engineer. I commenced my employment at the MPSC on September 27,
7 2004.

8 Q. What are your responsibilities with respect to the Michigan Gas Cost Recovery
9 Program (GCR)?

10 A. I perform technical analysis and prepare appropriate spreadsheets in GCR case
11 proceedings. This analysis leads to the development of Staff's positions and
12 recommendations regarding GCR plan and reconciliation cases.

13 Q. Would you outline your background and work experience?

14 A. I obtained a Bachelor of Science degree in Mechanical Engineering, with honors,
15 from Michigan State University, in December 2003. I was awarded the
16 Mechanical Engineering Department Scholarship for two semesters.

17 Prior to my employment at the MPSC, I worked for Saginaw County Mosquito
18 Abatement Commission (SCMAC). During my tenure with the SCMAC, I was
19 responsible for surveying and drafting sites where future construction projects
20 were being planned. Since being hired at the Michigan Public Service
21 Commission in 2004, I have successfully completed the Gas Technology
22 Institute's Gas Distribution Operation Course, and attended the two week
23 NARUC (National Association of Regulatory Utility Commissioners) session

QUALIFICATIONS OF NORA B. QUILICO
CASE NUMBER U-14718
PART I

1 sponsored by the Institute of Public Utilities at Michigan State University. I have
2 filed testimony in several GCR plan cases including Michigan Consolidated Gas
3 Company's 2005-2006 plan case, U-14401, Consumers Energy Company's 2005-
4 2006 plan case, U-14403, Aquila's 2005-2006 plan case, U-14400, and SEMCO's
5 2005-2006 plan case, U-14402. I also testified in Michigan Consolidated Gas
6 Company's 2005-2006 GCR plan case, with respect to issues related to the use of
7 contingency factors. In April 2006 I attended a seminar sponsored by New
8 Energy entitled "How to Manage Your Gas Supply Portfolio in an Uncertain Gas
9 Market." The Seminar focused on hedging strategies and ways to reduce
10 volatility when buying natural gas.

DIRECT TESTIMONY OF NORA B. QUILICO
CASE NUMBER U-14718
PART II

1 Q. What is the purpose of your testimony in this proceeding?

2 A. The purpose of my testimony is to provide Staff's recommendation regarding
3 SEMCO Energy Gas Company's Gas Cost Recovery (GCR) Plan for the
4 operational year beginning April 2006. In addition, I will propose, on behalf of
5 Staff, modifications to SEMCO's Gas Purchasing Strategy and the use of Staff's
6 Multi-Input method to compute GCR contingent factors.

7 Q. Are you sponsoring any exhibits?

8 A. Yes, I am sponsoring two exhibits:

9 Exhibit S-3 (NBQ-1) Calculation of Fractional Multipliers for Staff Multi-
10 Input Contingent GCR Factor Method

11 Exhibit S-4 (NBQ-2) Proposed Gas Portfolio Using Staff's Fixed-Price
12 Purchase Tier guidelines

13 Q. Should the Commission approve SEMCO's GCR Plan?

14 A. Yes, the Commission should: 1) approve SEMCO's GCR Plan, subject to Staff's
15 proposed refinements to SEMCO's Gas Purchasing Guidelines; 2) approve the
16 recovery of an estimated \$385 million of gas supply expenses; and 3) establish a
17 base GCR factor of \$9.9328 per Mcf, subject to adjustment via Staff's Multi-Input
18 NYMEX GCR contingent factors on a quarterly basis.

19 **Gas Purchase Guidelines Recommendation**

20 Q. Currently, what are the elements of SEMCO's proposed fixed-price purchase
21 Guidelines?

22 A. SEMCO's current Purchase Strategy Guidelines indicate that SEMCO will
23 purchase 6,786,030 Dth of fixed price supply for delivery during the winter

DIRECT TESTIMONY OF NORA B. QUILICO
CASE NUMBER U-14718
PART II

1 months of November through March. SEMCO will lock in prices of this quantity
2 in equal increments of 969,433 Dth over the seven summer months. These
3 supplies will account for approximately 40% of winter flowing pipeline supply
4 requirements. Beyond this, purchases related to market opportunities would be
5 made at the Company's discretion.

6 Q. Is Staff recommending that the Commission approve SEMCO's proposed
7 Guidelines?

8 A. No, Staff is proposing improved guidelines that are designed to be more
9 beneficial to the company and SEMCO's customers. Appropriate hedging
10 guidelines must incorporate effective fixed-price targets, but the utility must
11 retain the discretion to determine how to meet the targets. Staff is recommending
12 the level of the fixed-price targets for an effective gas portfolio, but not how
13 SEMCO should meet the Gas Purchase Guidelines. The reasonableness and
14 prudence of the company's approach to meeting the fixed-price targets will be
15 reviewed in the reconciliation.

16 Q. Would you describe the objectives of an appropriate gas-price hedging guideline
17 for SEMCO?

18 A. The first objective is to obtain a minimum level of fixed-price purchases of 50%
19 of winter flowing supply before the beginning of the winter heating season. The
20 second objective is to create greater diversity in the timing of fixed-price
21 commitments by locking-in a significant portion of fixed-price supply prior to the
22 beginning of the GCR annual period. Minimum fixed-price commitments, made
23 during prior GCR periods, will increase retail rate stability. The minimum fixed-

DIRECT TESTIMONY OF NORA B. QUILICO
CASE NUMBER U-14718
PART II

1 price commitments accomplish stability by having a significant portion of the
2 underlying supply at prices that are known before the GCR Plan filing. This
3 results in the ability to accurately establish a GCR base factor for the year, and
4 secure favorable market opportunities over a longer period. More importantly,
5 these purchases are not subject to future market volatility. Staff is also proposing
6 two intra-period fixed-price target levels to provide increased diversity for
7 purchases made during the GCR annual period. Lastly, Staff's intent is for
8 SEMCO to exercise its discretion, and expertise, to determine how to meet the
9 proposed minimum fixed-price purchase target levels.

10 Q. How do the above objectives translate into Staff's specific recommendation?

11 A. Staff is recommending that SEMCO's Gas Purchasing Guidelines be reformulated
12 into four sequential fixed-price purchase tiers that take effect both prior to and
13 during the GCR annual period. The first fixed-price purchase target commences
14 on the 1st of December preceding the current GCR annual period. The second
15 fixed-price coverage target takes place on the commencement of the GCR annual
16 period, which is April 1st. The two remaining tiers occur on July 1st, and
17 November 1st within the current GCR period. The numerical value of each fixed-
18 price coverage target consists of a successively increasing percentage of
19 remaining GCR purchases. Additionally, fixed-price coverage targets are defined
20 within a 5% range. The December 1st and April 1st tiers are 15%-20%, and 25%-
21 30%, respectively. Two intra-period tiers, for July 1st and November 1st consist of
22 a July 1st fixed-price target of 40% of winter pipeline flowing supply, and a
23 November 1st target of 50% of winter pipeline flowing supply. SEMCO's

DIRECT TESTIMONY OF NORA B. QUILICO
CASE NUMBER U-14718
PART II

1 resulting portfolio, based on Staff's proposed minimum fixed-price purchase tier
2 levels, is graphically shown in Exhibit S-4, page 1. Exhibit S-4, page 2 shows the
3 calculation of the volumes used in Exhibit S-4, page 1 to illustrate SEMCO's
4 supply portfolio in future GCR plan cases. For each tier level, Staff assumed that
5 the fixed-price volumes would be distributed equally over the remaining months
6 of the plan period. However, SEMCO has the discretion to allocate the fixed-
7 price supply as appropriate, taking full advantage of opportunities presented by
8 the market, as long as the target percent is achieved by the specified date.

9 Q. Did Staff consider a requirement for SEMCO to obtain 100 percent of its gas
10 purchases on a fixed-price basis?

11 A. No. The basic principle of portfolio risk management is to create a balanced
12 portfolio of offsetting risks. Such a high level of fixed-price supply actually
13 increases the level of price risk associated with gas market volatility and takes
14 away the benefits of favorable market downturns. A supply portfolio consisting
15 of approximately 1/3 fixed-price, 1/3 gas storage, and 1/3 spot constitutes an
16 appropriate balance of risks. Under this scenario, although 2/3 of supply is
17 actually purchased on an index price basis, because of storage gas, the guideline
18 effectively results in fixing 2/3 of supply.

19 Q. Can SEMCO exceed the minimum fixed-price commitments?

20 A. Yes. As market opportunities present themselves, SEMCO may lock-in
21 additional fixed-price supplies with adequate price signals derived from technical
22 indicators for purchases during the current year and beyond the current GCR
23 period.

DIRECT TESTIMONY OF NORA B. QUILICO
CASE NUMBER U-14718
PART II

1 Q. Are all of Staff's proposed purchasing guidelines to be met for the 2006-2007
2 plan year?

3 A. No, Staff recognizes that the December 1st and April 1st guidelines can not be met
4 because the dates have already passed. Nonetheless, Staff was informed by
5 SEMCO that the company had fixed some portion of their requirement. The
6 portion that was fixed will be applied to the remaining tiers. The July 1st guideline
7 is being lowered to 17% of winter flowing purchases at a fixed price because this
8 is about where they should be by July in order to meet the November 1st
9 guideline. The November 1st guideline is also being lowered for this plan year to
10 40% of winter flowing pipeline purchases to be at a fixed price. This was done
11 because in the past SEMCO has only been required to have 40% of its winter
12 flowing supply fixed. Due to short notice and time constraints the 50%
13 requirement will not go into effect until the next plan year.

14 **Multi-Input GCR Contingent Method Recommendation**

15 Q. What are Staff's recommendations regarding the calculation of GCR Contingent
16 Factors?

17 A. Staff has proposed the Multi-Input Contingent Matrix. This is a two-input method
18 based upon the fixed-price purchase targets proposed above.

19 Q. Why is Staff recommending that the Commission order SEMCO to implement a
20 Multi-Input method of calculating GCR contingent factors, different from what
21 SEMCO proposed in its plan filing?

22 A. Staff developed an improved method of calculating New York Mercantile
23 Exchange natural gas futures (NYMEX) based contingent factors that provide a

DIRECT TESTIMONY OF NORA B. QUILICO
CASE NUMBER U-14718
PART II

1 more accurate price ceiling. The recalculated factors are designed to incorporate
2 the increase or decrease in NYMEX natural gas futures pricing in proportion to
3 the percent of the company's supply bought at index based pricing. This method
4 also complies with Commission's order on the implementation of contingent price
5 ceilings on a symmetrical basis. The improved method relies upon separate
6 summer and winter NYMEX strips and as such constitutes a two-input method.

7 Q. Why is Staff recommending a simplified Multi-Input method of calculating GCR
8 contingent factors, different from what SEMCO proposed in its plan filing?

9 A. Staff was able to develop a simplified method of calculating NYMEX contingent
10 factors based upon Staff's recommended fixed-price purchase tier levels. Staff
11 reduced the number of inputs to two. The first input is the summer price strip
12 used to calculate an adjustment for summer flowing gas and storage, and the
13 second input is a strip of the remaining winter months used to adjust the winter
14 flowing supply. The exact calculation of these inputs is described in more detail
15 by Staff witness Lisa Kindschy. Staff eliminated the Dollar Cost Averaging
16 (DCA) input because SEMCO now has the discretion to purchase gas by any
17 method, including DCA, provided that the new fixed-price coverage targets are
18 attained as outlined above.

19 Q. What are the relevant price strip increases that should be incorporated in the
20 calculation methodology?

21 A. Price changes related to flowing pipeline supplies during the remaining months of
22 the GCR period are primarily composed of summer and winter flowing supply
23 and storage withdrawals. The winter flowing supply is determined by a NYMEX

DIRECT TESTIMONY OF NORA B. QUILICO
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PART II

1 increase or decrease in the remaining winter months, November through March,
2 of the GCR period. The cost of gas purchased during the summer injection period
3 is the primary determinant of the per-unit cost of gas withdrawn from storage
4 during the winter. Thus, the relevant price increase or decrease is the NYMEX
5 price strip for the entire summer period, April through October. This includes
6 summer months that are no longer being trading. The same summer strip (April
7 through October) is also used to account for price increases or decreases in
8 summer flowing supply. When the per-unit NYMEX price changes this
9 constitutes a future price-event and is used to determine the Incremental
10 Contingent Factors.

11 Q. With respect to the last two quarters of the GCR period, would Staff's proposed
12 new methodology entail the use of NYMEX gas futures prices relating to the prior
13 summer injection season?

14 A. Yes. The cost of gas supplies purchased for injection into storage is not recovered
15 in the GCR cost of gas until the gas is actually withdrawn. Consequently,
16 NYMEX pricing events causing an increase or decrease in the cost of gas injected
17 into storage result in a delayed impact to the GCR cost of gas sold. The complete
18 summer strip of NYMEX prices from April through October must be used to
19 adjust the GCR factor when the gas is withdrawn; therefore this strip is still used
20 to calculate a contingent adjustment in the last two quarters of the plan year.

21 Q. Why is a "Multi-Input Method" necessary to calculate GCR contingent factors?

22 A. For a gas utility such as SEMCO, and in fact for all of Michigan based utilities,
23 storage withdrawals during the last two quarters can account for a large portion

DIRECT TESTIMONY OF NORA B. QUILICO
CASE NUMBER U-14718
PART II

1 (38%) of supply serving the winter load-requirements. A single-input method
2 does not take into account such a large component of supply; therefore, a summer
3 run-up in market prices can result in a severe understatement in the true cost of
4 gas. Conversely, in the case of a run-up in winter market prices, a single input
5 method can severely overstate the true cost of gas and thereby establish excessive
6 GCR factors, to the detriment of GCR customers. For simplicity and ease of use
7 the Multi-Input method was kept to two inputs.

8 Q. Does the Multi-Input NYMEX contingent factor methodology allow for the direct
9 statement of new price ceilings within a tariff sheet, as is true for a single input
10 method?

11 A. No. Two independent NYMEX gas price events are incorporated in the revised
12 contingent GCR price ceiling. Because Staff's proposal sets new price ceilings
13 based on independent future events, several combinations are possible. For this
14 reason, GCR contingent factors must be stated on an incremental basis. The
15 incremental GCR contingent factors are added to the base GCR factor, in order to
16 determine the new GCR price ceiling. The incremental factors are stated in fixed
17 dollar amounts per unit of gas, pursuant to the requirements of Section 6h(6) of
18 Act 304. The calculation of the multiple incremental GCR contingent factors is
19 slightly more involved than a single input method, but is easy to understand. The
20 new tariff sheet resulting from the Multi-Input method is similar in form to the
21 existing single-input GCR contingent factor tariff, and retains its essential
22 character and simplicity of use.

DIRECT TESTIMONY OF NORA B. QUILICO
CASE NUMBER U-14718
PART II

1 Q. What is the recommended base GCR factor to which the incremental GCR
2 contingent factors are added?

3 A. Staff's recommended base GCR factor is \$9.9328 per Mcf, as calculated by Staff
4 witness Lisa Kindschy.

5 Q. What is Staff's objective in developing its Multi-Input contingent factor method?

6 A. The objective is to refine the method of calculating GCR contingent factors in a
7 manner that provides utilities the ability to recover increases in natural-gas market
8 prices and avoid overstating the true cost of gas, under real-world conditions, yet
9 without undue complexity in implementing new GCR price-ceilings.

10 Q. Please continue.

11 A. Since the additional cost of gas is related to a run-up in the market-price of gas,
12 incremental GCR contingent factors can be calculated as the product of a
13 fractional multiplier, F_i [MMbtu/Mcf], times the per-unit change in futures prices
14 for the relevant period. Thus: $\Delta GCRfactor_i = F_i \times \Delta NYMEX_i$.

15 Q. Are you sponsoring an exhibit containing the computation method for the
16 fractional multipliers?

17 A. Yes. Staff Exhibit S-3, page 1, summarizes the data input used to quantify the
18 quarterly fractional multipliers that will be used in the current GCR period. These
19 fractional multipliers were calculated assuming that the December 1st and April 1st
20 targets were not met, as they occurred in the past. Staff is still including the July
21 1st target of 17% of winter requirements and the November 1st target of 40% of
22 winter requirements into the calculation of the current GCR period fractional
23 multipliers. The input data is directly taken from SEMCO's Plan filing, Exhibit

DIRECT TESTIMONY OF NORA B. QUILICO
CASE NUMBER U-14718
PART II

1 A-20 (WEF-15), page 1. Staff Exhibit S-3, page 2, shows the calculation of the
2 two fractional multipliers for each of the four quarters. Also included in the
3 calculation of the fractional multipliers were the volumes of summer and winter
4 gas that SEMCO already had at a fixed price at the time Staff was putting together
5 its testimony. That information was provided by SEMCO to Staff by telephone.
6 The resulting fractional multipliers from Exhibit S-3, page 2 are used by Staff
7 witness Lisa Kindschy in the contingent matrix.

8 Q. Should the price ceiling be increased from the current cap of \$2.00 per MMBtu?

9 A. Yes, the current cap should be raised. The increased level of volatility in the
10 North American natural gas commodity market experienced recently, has led
11 Staff to reconsider the current cap of \$2.00 per MMBtu. Staff is recommending
12 that GCR contingent factors be capped at a level that reflects no more than a
13 \$3.00 per MMBtu increase in NYMEX natural gas futures prices. Should a severe
14 run-up in the market beyond that reflected in the cap occur, the utility may file a
15 re-opener under section 6h(10) of Act 304.

16 Q. Does Staff's improved method of calculating contingent GCR factors allow
17 symmetrical application of contingent GCR factors, i.e. up or down in response to
18 increases or decreases in market prices?

19 A. Staff's proposed "Multi-Input" method always takes into account the correct
20 pricing for gas storage withdrawals, and does so independently of price changes
21 related to flowing pipeline supplies during remaining winter months. Therefore,
22 the refined Multi-Input method can be implemented in a symmetrical manner.

23 Q. How would this be done?

DIRECT TESTIMONY OF NORA B. QUILICO
CASE NUMBER U-14718
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1 A. Each quarter, incremental contingent GCR factors would be determined pursuant
2 to Staff's proposed tariff supported by Ms. Kindschy. The sum of the two
3 contingent factors and the base GCR factor constitute the new GCR price ceiling,
4 regardless of whether or not the new ceiling is higher, or lower, than the currently
5 effective price ceiling.

6 Q. Would this method ever result in a GCR price ceiling that is lower than the
7 approved base GCR factor?

8 A. No. At most, it could negate a contingent price increase that was implemented in
9 a prior quarterly adjustment, but it would never result in a price ceiling below the
10 approved base GCR factor.

11 Q. Does this conclude your testimony at this time?

12 A. Yes it does.

S T A T E O F M I C H I G A N
B E F O R E T H E M I C H I G A N P U B L I C S E R V I C E C O M M I S S I O N

* * * *

In the matter of the application of	)	
SEMCO ENERGY GAS COMPNAY	)	
for authority to implement a gas cost	)	Case No. U- 14718
recovery plan and factors for the 12-month	)	
period of April 2006 through March 2007	)	
	)	

EXHIBITS OF
NORA B. QUILICO
MICHIGAN PUBLIC SERVICE COMMISSION

May 30, 2006

SEMCO
Calculation of Fractional Multipliers for Staff Two-Input Contingent GCR Factor Method

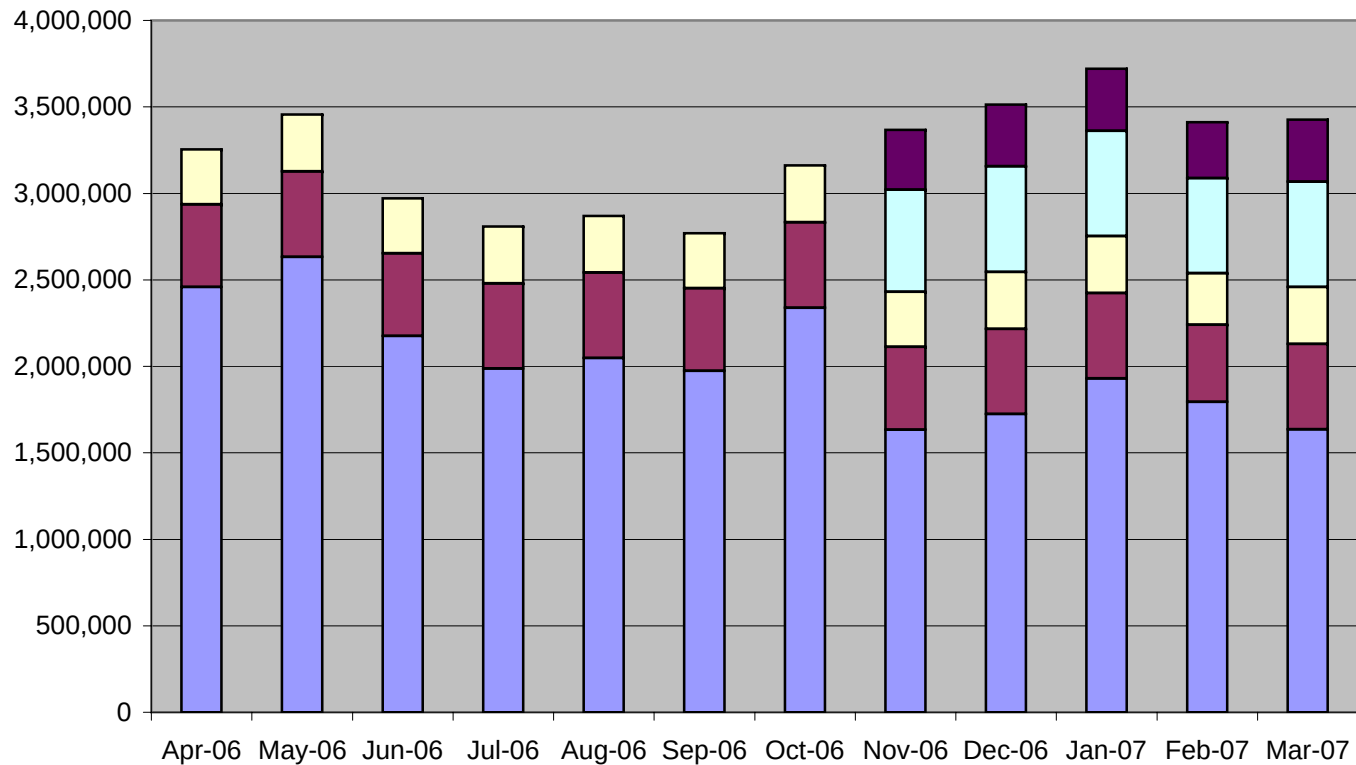
Case No. U-14718
Exhibit S-3 (NBQ-1)
Witness: Nora B. Quilico
Date: May 30, 2006
Page 1 of 2

Initial Quantities Dth (MMBtu)	Apr-06	May-06	Jun-06	Jul-06	Aug-06	Sep-06	Oct-06	Nov-06	Dec-06	Jan-07	Feb-07	Mar-07	Total
Dec 1st Tier --Minimum % of Annual Purchases	0.0%												
Net Spot	3,255,306	3,455,571	2,971,253	2,808,577	2,870,362	2,769,504	3,161,372	3,366,891	3,513,687	3,719,816	3,412,038	3,426,189	38,730,566
Price fixed before Dec 1 of Prior Plan Period	0	0	0	0	0	0	0	0	0	0	0	0	0
Fuel	99,437	97,828	101,295	100,909	98,842	95,418	98,824	130,194	174,677	178,581	156,959	156,544	1,489,508
Purchases (including Fuel)	3,354,743	3,553,399	3,072,548	2,909,486	2,969,204	2,864,922	3,260,196	3,497,085	3,688,364	3,898,397	3,568,997	3,582,733	40,220,074
Purchases (Not Including Fuel)	3,255,306	3,455,571	2,971,253	2,808,577	2,870,362	2,769,504	3,161,372	3,366,891	3,513,687	3,719,816	3,412,038	3,426,189	38,730,566
Injections (Net)	-353,539	-1,614,911	-2,266,145	-2,019,394	-1,968,311	-1,869,619	-991,681	0	0	0	0	0	-11,083,600
Withdrawals (Net)	75,000	0	0	0	0	0	0	655,010	2,441,030	3,146,156	2,635,025	1,514,020	10,466,241
Requirements	2,976,767	1,840,660	705,108	789,183	902,051	899,885	2,169,691	4,021,901	5,954,717	6,865,972	6,047,063	4,940,209	38,113,207
Percent of remaining purchases @ fixed-price	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
Fraction remaining summer purchases @ fixed-price as of Dec 1	0.000												
Fraction remaining winter purchases @ fixed-price as of Dec 1	0.000												
Fixed Price Supply Targets	Apr-06	May-06	Jun-06	Jul-06	Aug-06	Sep-06	Oct-06	Nov-06	Dec-06	Jan-07	Feb-07	Mar-07	Total
APRIL 1st Tier --Minimum % of Annual Purchases	0.0%												
Additional % fixed-price purchases	0.0%												
Price fixed during Dec-March of Prior Plan Period (Dth/month)	300,000	387,500	375,000	387,500	387,500	375,000	387,500	105,000	108,500	0	0	0	2,813,500
New fixed-price purchase level (Dth)	300,000	387,500	375,000	387,500	387,500	375,000	387,500	105,000	108,500	0	0	0	2,813,500
Percent of remaining purchases @ fixed-price (as of April 1)	7.3%	7.1%	6.6%	6.0%	5.2%	4.2%	2.9%	1.2%	0.8%	0.0%	0.0%	0.0%	
Fraction remaining summer purchases @ fixed-price as of April 1	0.122												
Fraction remaining winter purchases @ fixed-price as of April 1	0.012												
July 1st Tier: Minimum % of Winter Purchases								17.0%					
Additional % fixed-price purchases								15.8%					
April-June fixed-price purchases (Dth/month)	0	0	0	0	0	0	0	546,569	564,788	564,788	510,131	564,788	2,751,066
New fixed-price purchase level (Dth)	300,000	387,500	375,000	387,500	387,500	375,000	387,500	651,569	673,288	564,788	510,131	564,788	4,502,066
Percent of remaining purchases @ fixed-price (as of July 1)				15.5%	15.7%	15.9%	16.3%	17.0%	16.4%	15.5%	15.7%	16.5%	
Fraction remaining summer purchases @ fixed-price as of July 1				0.132									
Fraction remaining winter purchases @ fixed-price as of July 1				0.170									
NOV 1st Tier Minimum % of Remaining Purchases								40.0%					
Additional % fixed-price purchases								23.0%					
July-Oct fixed-price purchases (Dth/month)	0	0	0	0	0	0	0	796,864	823,426	823,426	743,740	823,426	4,010,883
New fixed-price purchase level (Dth)	300,000	387,500	375,000	387,500	387,500	375,000	387,500	1,448,433	1,496,715	1,388,215	1,253,871	1,388,215	6,975,448
Percent of remaining purchases @ fixed-price (as of Nov 1)								40.0%	39.3%	38.2%	38.6%	40.5%	
Fraction remaining summer purchases @ fixed-price as of Oct 1							0.123						
Fraction remaining winter purchases @ fixed-price as of Nov 1								0.400					
Final Quantities	Apr-06	May-06	Jun-06	Jul-06	Aug-06	Sep-06	Oct-06	Nov-06	Dec-06	Jan-07	Feb-07	Mar-07	Total
Final fixed-price purchases	300,000	387,500	375,000	387,500	387,500	375,000	387,500	1,448,433	1,496,715	1,388,215	1,253,871	1,388,215	9,575,448
Final Spot	2,955,306	3,068,071	2,596,253	2,421,077	2,482,862	2,394,504	2,773,872	1,918,458	2,016,972	2,331,601	2,158,167	2,037,974	29,155,118
Final Purchases	3,255,306	3,455,571	2,971,253	2,808,577	2,870,362	2,769,504	3,161,372	3,366,891	3,513,687	3,719,816	3,412,038	3,426,189	38,730,566
Final Injections (Net)	-353,539	-1,614,911	-2,266,145	-2,019,394	-1,968,311	-1,869,619	-991,681	0	0	0	0	0	-11,083,600
Final Withdrawals (Net)	75,000	0	0	0	0	0	0	655,010	2,441,030	3,146,156	2,635,025	1,514,020	10,466,241
Final Requirements	2,976,767	1,840,660	705,108	789,183	902,051	899,885	2,169,691	4,021,901	5,954,717	6,865,972	6,047,063	4,940,209	38,113,207
Fraction remaining purchases fixed as of beginning of month	0.073	0.071	0.066	0.155	0.157	0.159	0.163	0.400	0.393	0.382	0.386	0.405	24.7%

Remaining Month Data Summary	Apr-06	Jul-06	Oct-06	Jan-07
Ps Summer purchases (Dth Delivered)	21,291,945	11,609,815	3,161,372	0
I Storage Injections Dth	-11,083,600	-6,849,005	-991,681	0
W Storage Withdrawals Dth	10,466,241	10,391,241	10,391,241	7,295,201
Pw Winter Purchases (Dth Delivered)	17,438,621	17,438,621	17,438,621	10,558,043
R Requirements Remaining Dth	38,113,207	32,590,672	29,999,553	17,853,244
f _s fraction summer purchases @ index	0.88	0.87	0.88	0.00
f _w fraction winter purchases @ index	0.99	0.83	0.60	0.62
f _{storage} fraction total storage injections @ index	0.88			
f _{wg} fraction of working-gas inventory injected during the summer	0.91			
f _{fuel} transportation fuel	1.038			
h system-average heating value (MMbtu/Mcf @14.65dry)	1.014			
(P _s -I)*f _s /R summer flowing supply, less injections, @ index	0.235	0.127	0.063	0.000
W*(f _{storage} *f _{wg})/R winter storage withdrawals @ index	0.218	0.254	0.276	0.325
(P _w *f _w)/R winter flowing supply @ index	0.452	0.444	0.349	0.366
fixed-price supply	0.094	0.176	0.312	0.309
(Σ F) = fraction remaining requirements	1.000	1.000	1.000	1.000
Fractional Multipliers (index supply)	Apr-06	Jul-06	Oct-06	Jan-07
F _{summer} = [(P _s -I)*f _s /R]*f _{fuel} *h	0.248	0.133	0.067	0.000
F _{storage} = [W*(f _{storage} *f _{wg})/R]*f _{fuel} *h	0.230	0.267	0.290	0.342
F _{winter} = [P _w *f _w /R]*f _{fuel} *h	0.476	0.468	0.367	0.385
(Σ F)	0.953	0.868	0.724	0.727
Combined Fractional Multipliers	Apr-06	Jul-06	Oct-06	Jan-07
F _{summer /storage withdraw} = [(P _s -I)*f _s /R + (W*(f _{storage} *f _{wg})/R)*f _{fuel} *h	0.477	0.400	0.357	0.342
F _{winter} = (P _w *f _w)/R*f _{fuel} *h	0.476	0.468	0.367	0.385
(Σ F)	0.953	0.868	0.724	0.727

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Exhibit: S-4 (NBQ-2)
Witness: NBQuilico
Date: May 30, 2006
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SEMCO Minimum Tier Purchases Staff Proposed Guidelines



	Apr-06	May-06	Jun-06	Jul-06	Aug-06	Sep-06	Oct-06	Nov-06	Dec-06	Jan-07	Feb-07	Mar-07
■ July-Oct fixed-price purchases (Dth/month)								346,463	358,011	358,011	323,365	358,011
■ April-June fixed-price purchases (Dth/month)								590,017	609,684	609,684	550,683	609,684
■ Price fixed during Dec-March of Prior Plan Period (Dth/month)	318,333	328,945	318,333	328,945	328,945	318,333	328,945	318,333	328,945	328,945	297,111	328,945
■ Price fixed before Dec 1 of Prior Plan Period	477,500	493,417	477,500	493,417	493,417	477,500	493,417	477,500	493,417	493,417	445,667	493,417
■ Net Spot	2,459,472	2,633,210	2,175,419	1,986,216	2,048,001	1,973,670	2,339,011	1,634,578	1,723,630	1,929,759	1,795,212	1,636,132

SEMC0
Gas Portfolio Under Staff's Fixed-Price Purchase Tier Guidelines
Minimum Tier Quantities

Initial Quantities (Plan Filing)	Apr-06	May-06	Jun-06	Jul-06	Aug-06	Sep-06	Oct-06	Nov-06	Dec-06	Jan-07	Feb-07	Mar-07	Total
Dec 1st Tier --Minimum % of Annual Purchases	15.0%												
Net Spot	2,777,806	2,962,154	2,493,753	2,315,160	2,376,945	2,292,004	2,667,955	2,889,391	3,020,270	3,226,399	2,966,371	2,932,772	32,920,981
Price fixed before Dec 1 of Prior Plan Period	477,500	493,417	477,500	493,417	493,417	477,500	493,417	477,500	493,417	493,417	445,667	493,417	5,809,585
Purchases	3,255,306	3,455,571	2,971,253	2,808,577	2,870,362	2,769,504	3,161,372	3,366,891	3,513,687	3,719,816	3,412,038	3,426,189	38,730,566
Injections (Net)	-353,539	-1,614,911	-2,266,145	-2,019,394	-1,968,311	-1,869,619	-991,681	0	0	0	0	0	-11,083,600
Withdrawals (Net)	75,000	0	0	0	0	0	0	655,010	2,441,030	3,146,156	2,635,025	1,514,020	10,466,241
Requirements	2,976,767	1,840,660	705,108	789,183	902,051	899,885	2,169,691	4,021,901	5,954,717	6,865,972	6,047,063	4,940,209	38,113,207
Percent of remaining purchases @ fixed-price	15.0%	15.0%	15.1%	15.0%	14.7%	14.4%	14.1%	13.8%	13.7%	13.6%	13.7%	14.4%	
Fraction remaining summer purchases @ fixed-price as of Dec 1	0.160												
Fraction remaining winter purchases @ fixed-price as of Dec 1	0.138												
Fixed Price Supply Targets	Apr-06	May-06	Jun-06	Jul-06	Aug-06	Sep-06	Oct-06	Nov-06	Dec-06	Jan-07	Feb-07	Mar-07	Total
APRIL 1st Tier --Minimum % of Annual Purchases	25.0%												
Additional % fixed-price purchases	10.0%												
Price fixed during Dec-March of Prior Plan Period (Dth/month)	318,333	328,945	318,333	328,945	328,945	318,333	328,945	318,333	328,945	328,945	297,111	328,945	3,873,057
New fixed-price purchase level (Dth)	795,834	822,361	795,834	822,361	822,361	795,834	822,361	795,834	822,361	822,361	742,778	822,361	9,682,642
Percent of remaining purchases @ fixed-price (as of April 1)	25.0%	25.1%	25.2%	25.0%	24.6%	24.1%	23.4%	23.0%	22.8%	22.6%	22.9%	24.0%	
Fraction remaining summer purchases @ fixed-price as of April 1	0.267												
Fraction remaining winter purchases @ fixed-price as of April 1	0.230												
July 1st Tier: Minimum % of Winter Purchases								40.0%					
Additional % fixed-price purchases								17.0%					
April-June fixed-price purchases (Dth/month)								590,017	609,684	609,684	550,683	609,684	2,969,753
New fixed-price purchase level (Dth)	795,834	822,361	795,834	822,361	822,361	795,834	822,361	1,385,851	1,432,046	1,432,046	1,293,461	1,432,046	10,238,366
Percent of remaining purchases @ fixed-price (as of July 1)				35.2%	35.9%	36.8%	37.9%	40.0%	39.7%	39.4%	39.9%	41.8%	
Fraction remaining summer purchases @ fixed-price as of July 1				0.281									
Fraction remaining winter purchases @ fixed-price as of July 1				0.400									
NOV 1st Tier: Minimum % of Winter Purchases								50.0%					
Additional % fixed-price purchases								10.0%					
July-Oct fixed-price purchases (Dth/month)								346,463	358,011	358,011	323,365	358,011	1,743,862
New fixed-price purchase level (Dth)	795,834	822,361	795,834	822,361	822,361	795,834	822,361	1,732,313	1,790,057	1,790,057	1,616,826	1,790,057	8,719,311
Percent of remaining purchases @ fixed-price (as of Nov 1)								50.0%	49.7%	49.2%	49.8%	52.2%	
Fraction remaining summer purchases @ fixed-price as of Oct 1							0.260						
Fraction remaining winter purchases @ fixed-price as of Nov 1							0.500						
Final Quantities (Mcf)	Apr-06	May-06	Jun-06	Jul-06	Aug-06	Sep-06	Oct-06	Nov-06	Dec-06	Jan-07	Feb-07	Mar-07	Total
Final fixed-price purchases	795,834	822,361	795,834	822,361	822,361	795,834	822,361	1,732,313	1,790,057	1,790,057	1,616,826	1,790,057	14,396,256
Final Spot	2,459,472	2,633,210	2,175,419	1,986,216	2,048,001	1,973,670	2,339,011	1,634,578	1,723,630	1,929,759	1,795,212	1,636,132	24,334,310
Final Purchases	3,255,306	3,455,571	2,971,253	2,808,577	2,870,362	2,769,504	3,161,372	3,366,891	3,513,687	3,719,816	3,412,038	3,426,189	38,730,566
Final Injections (Net)	-353,539	-1,614,911	-2,266,145	-2,019,394	-1,968,311	-1,869,619	-991,681	0	0	0	0	0	-11,083,600
Final Withdrawals (Net)	75,000	0	0	0	0	0	0	655,010	2,441,030	3,146,156	2,635,025	1,514,020	10,466,241
Final Requirements	2,976,767	1,840,660	705,108	789,183	902,051	899,885	2,169,691	4,021,901	5,954,717	6,865,972	6,047,063	4,940,209	38,113,207
Fraction remaining purchases fixed as of beginning of month	0.250	0.251	0.252	0.352	0.359	0.368	0.379	0.500	0.497	0.492	0.498	0.522	37.2%

STATE OF MICHIGAN
BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

* * * * *

STATE OF MICHIGAN	)	
	)	Case No. U-14718
County of Ingham	)	

PROOF OF SERVICE

Cindy Stephens, being duly sworn, deposes and says that on May 30, 2006, A.D. she served a copy of the attached MPSC Testimony and Exhibits, by mailing copies thereof by first class mail, postage prepaid, or by inter-departmental mail, to the persons as shown on the attached service list.

**Cindy
Stephens**

Digitally signed by Cindy
Stephens
DN: CN = Cindy Stephens, C
= US, O = Michigan Public
Service Commission, OU =
Regulated Energy Division
Date: 2006.05.30 13:25:11 -
04'00'

Cindy Stephens

Subscribed to before me this
30th day of May, A.D., 2006

**Sharron A.
Allen**

Digitally signed by Sharron A. Allen
DN: cn=Sharron A. Allen, c=US,
o=MPSC, ou=Case Management,
email=saallen@michigan.gov
Date: 2006.05.30 13:28:46 -04'00'

Notary Public Ingham County, Michigan
My Commission expires August 16, 2011

Case No. U-14718
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